Alabama Student Survey of Risk and Protective Factors

Demand and Needs Assessment Studies: Alcohol and Other Drugs

Technical Final Report

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EXECUTIVE SUMMARY

The Alabama Youth Risk and Protective Factor Survey was administered as part of the State's prevention needs assessment project. The information from the student survey study, along with findings from the social indicators and community resource assessment studies, provides invaluable insight into the State's substance use prevention needs. More specifically, these data will help planners and program providers better understand what prevention programs should be chosen and implemented in order to reduce substance use in Alabama's communities.

To help develop a comprehensive picture of Alabama's substance use needs, the youth survey collected self-report data on a variety of demographic, community, and behavioral variables. These data were collected from over 96,000 public school students in grades six through twelve. Sampling plans, using the classroom as the sampling unit, were developed and utilized to ensure that the selected sample was representative of students statewide. Additionally, weights were formulated such that the proportion of weighted respondents in each stratum roughly matched the proportion of actual students in the stratum, according to enrollment statistics.

PREVALENCE OF SUBSTANCE USE

Substance use prevalence rates for alcohol, tobacco (cigarettes and chewing tobacco), marijuana, inhalants, LSD/psychedelics, cocaine/crack, and "other drugs" were calculated and analyzed for a variety of categorizations (i.e., grade, gender, race/ethnicity, health planning region) for both lifetime and past month (30-day) use. Some particularly salient findings emerged:

- Prevalence rates were highest for the use of alcohol, tobacco (particularly cigarettes), and marijuana.

- Developmental patterns frequently emerged in the data, such that students in the upper grades were observed to report higher prevalence rates of use than students in the lower grades. One striking exception to this pattern was exhibited in the analyses of inhalant use, which peaked for middle school-aged students, rather than for high school-aged students.

PREVALENCE OF ANTISOCIAL/DELINQUENT BEHAVIORS

The frequency with which Alabama's adolescents reported committing antisocial/delinquent behaviors was also explored. Prevalence rates obtained from students' self-reports of committing delinquent behaviors in the past year, such as getting suspended from school, getting drunk or high at school, or attacking others with the intention to harm them, were generated for each of the eight categories of such

behaviors and were analyzed by various groupings (i.e., grade, gender, race/ethnicity, health planning region). Highlights of the results include:

- For all categories of delinquent behaviors, male students were more likely than female students to engage in these behaviors

- Developmental patterns emerged for some delinquent behaviors; for instance, students in the upper grades reported higher prevalence rates for getting drunk or high at school or selling drugs than students in the lower grades.

PREVALENCE OF RISK AND PROTECTIVE FACTORS

Prevalence rates of risk and protective factors for substance use were also examined in this study. Risk factors are characterized as variables that, when present, increase the likelihood of a person experiencing a disorder or developing a problem, such as substance abuse. Protective factors, on the other hand, can be construed as variables that may serve as a buffer to mitigate the harmful effects of risk factors. Risk and protective factor scales were computed and their associations with substance use outcomes were examined. Those risk or protective factor scale/substance use outcome associations that were particularly informative were subjected to further analyses. Cutoff points that dichotomized the scales ("at risk"/"not at risk" or "protected"/"not protected") were established for the informative risk or protective factor scale/substance use outcome combinations so that prevalence rates could be calculated. The prevalence rates of each county were depicted in a series of maps. The results indicated that:

- "Friends' use of drugs," "favorable attitudes toward drug use," "sensation seeking," "engaging in antisocial behavior," "interaction with antisocial peers," "community laws and norms favorable to drug use," and "perceived availability of drugs and handguns in the community" were risk factors that were particularly informative of certain types of substance use.

- Only the perceived risk of drug use was informative of protection against substance use (and only for the use of marijuana).

- Prevalence rates for risk or protective factor scale/substance use outcomes were higher for alcohol and tobacco than for inhalants, marijuana, or other drugs.

PREVALENCE OF NEED FOR PREVENTION PROGRAMMING

Based upon the risk and protective factor prevalence data, prevention program recommendations were made for each county. The programs were selected from the Center of Substance Abuse Prevention's list of model programs, effective programs, and best practices. If a student scored above the cutoff point for a particular risk factor scale/substance use outcome combination, the program(s) that addressed the risk factor were recommended for that student. Prevalence rates for each of the programs included on the list for this report reflected the number of respondents in each county who indicated (based upon their scale scores) that they were in need of the program. Recommendations for the Leadership and Resiliency Program was particularly prominent.

CONCLUSIONS AND RECOMMENDATIONS

Taken together, the findings obtained from the student survey suggest that:

- Alabama's adolescents use substances at a rate that is generally less than that of the national average, with the exception of tobacco products.

- Alabama's youth would especially benefit from the implementation of prevention programs that address those risk factors that have relatively higher prevalence rates for grades six through twelve, namely "friends' use of drugs," "favorable attitudes toward drug use," and "sensation seeking."

By utilizing and synthesizing the results of the student survey, social indicators, and community resource assessment studies, prevention planners and program providers can develop a system of delivering quality, relevant prevention programming that will effectively respond to the needs of the residents in their particular community.

INTRODUCTION

In an effort to ascertain the current utilization of and need for substance use prevention services in Alabama, the Alabama Department of Mental Health and Mental Retardation, Substance Abuse Services Division (SASD) conducted a needs assessment study comprising three components: a social indicators study, a community resources study, and a student survey. Upon receipt of a federal contract from the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention (CSAP) in 1999, the SASD initiated its assessment and became one of 19 states to participate in CSAP's State Needs Assessment Program. The three studies were conducted simultaneously and completed over the course of three years; when intricate patterns emerged in the data, CSAP granted a one-year extension to the State to allow for more complicated analyses.

This technical final report provides background information on and describes the methods and findings relating to the student survey. While the other two studies were intended to measure risk and protective factors among both adults and adolescents at the county level and to catalogue and assess existing prevention resources (the social indicator and community resource assessment studies, respectively), the student survey was devised to obtain data on substance use and risk and protective factors for substance use among Alabama's adolescent population at the individual level. More specifically, the questions contained on the Alabama Student Survey were designed to elicit information that could be used to determine the prevalence rates of alcohol, tobacco, and other drug usage, delinquency and violent behaviors, and risk and protective factors.

FAMILY OF NEEDS ASSESSMENT STUDIES

The student survey, social indicators, and community resource assessment studies were designed to generate complementary information that could be used to determine the need for and present utilization of substance use prevention services in Alabama. The student survey study supplied data describing the prevalence of current and lifetime substance use and levels of risk and protective factors for substance use among Alabama's adolescents, and the frequency with which delinquent acts were committed by this population. Similar to the student survey, the social indicators study produced information regarding the prevalence of risk and protective factors at the State, regional, and county-level for both adolescents and adults. The social indicators study, however, used archival data and did not allow for analysis at the individual level, as did the student survey. The community resource assessment study yielded data on prevention services that are currently provided. Taken together, the trio of needs assessment studies will serve to help detect gaps and areas of redundancy within the current prevention system.

PURPOSE AND RATIONALE

The overarching goal of the student survey was to systematically examine the prevalence of substance use and existence of risk and protective factors for substance abuse among Alabama's adolescents. The study was necessary to collect primary data using a set of standardized questions from a large, statewide sample of students in public schools. Although these data are cross-sectional and therefore cannot be used to predict long-term substance use behaviors (i.e., they should not be used to predict whether sixth-graders will use drugs by the twelfth grade), they are beneficial in helping to create a snapshot of current use.

Key research questions addressed by this study include:

1) What is the prevalence of current and lifetime ATOD use among Alabama's public school adolescent population and various subpopulations (i.e., grades, gender, races/ethnicities)?

2) What is the prevalence of risk and protective factors that can help predict substance use among this population?

3) How frequently do Alabama's adolescents commit delinquent acts (e.g., stealing cars, selling drugs, attacking other persons with the intention to harm them)?

4) How can specific prevention programs be targeted towards individuals who are identified as being at risk for substance use?

ALABAMA'S SUBSTANCE ABUSE PREVENTION PLANNING SYSTEM

The SASD envisions a system consisting of a network of community providers supplying science-based, rigorously evaluated prevention programs addressing the particular prevention needs of each community. The core of Alabama's substance abuse prevention planning system hinges upon a centralized funding system that awards funding to 22 catchment areas, according to a population-based formula. A local board governs each of these catchment areas and comprises representatives from the local municipalities and agencies. The community providers within each catchment area develop proposals for programming and submit proposals for the funding available to the catchment area. A prevention advisory committee, along with the SASD, evaluates proposals and allocates funding according to its established priorities and how well the proposed program would meet the particular needs of the locality.

To develop this comprehensive provider network and establish funding priorities, the State requires data detailing the need for and current utilization of such programming. Previously, the SASD has used data from national surveys and expert opinions to extrapolate the levels and nature of Alabama's substance use problems and what programming should be incorporated. While some data on substance use treatment

outcomes were available from the State's treatment needs assessment program, these findings were not an appropriate proxy for prevention-based information.

Given the limitations of the current system and the dearth of data directly speaking to Alabama's substance use concerns, Alabama has carried out the needs assessment with the expressed purpose of collecting data that will optimize planning and implementation of prevention services. The data acquired from the student survey, in conjunction with the social indicators and community resource assessment studies, will highlight current substance use problems and provide a glimpse of what can be expected in the near future, given the present prevention planning system. It is expected that these findings will contribute significantly toward planners' and providers' understanding of the magnitude of Alabama's substance use issues and ability to counteract problems with science-based solutions.

THE ATOD PROBLEMS AND PREVENTION ISSUES TO BE ADDRESSED

The ATOD problems addressed by the student survey include use of alcohol, tobacco (e.g., cigarettes and chewing tobacco), marijuana, cocaine/crack, LSD/psychedelics, inhalants, and "other drugs" (any drugs not specifically categorized on the survey; e.g., steroids, methamphetamine). The study focused on both current (i.e., 30-day) and lifetime use of these substances. Along with the prevalence of drug use, risk and protective factors for substance use were examined via the administration of this survey. The levels of these risk and protective factors were thought to partially predict substance use among the target population of school students. Once levels of risk and protection were ascertained, prevention programs that decrease risk factors and/or enhance protective factors and are tailored for particular segments (e.g., middle school vs. high school; various races/ethnicities) of the at-risk population were suggested as possible strategies to be implemented. Providers and planners will use the information derived from the student survey and the other studies included in the needs assessment to assist them in developing new prevention programming and considering modifications to the current population-based resource distribution formula.

RATIONALE FOR DATA COLLECTION METHOD

The instrument employed in this study was the Substance Abuse Risk and Protective Factor Survey, also known as the Communities That Care survey, as CSAP requires the use of this instrument. Many of the states in the CSAP Prevention Needs Assessment program have used this instrument, including Arizona, Arkansas, Colorado, Florida, Kansas, Louisiana, Maine, Michigan, Montana, Oregon, Tennessee and Vermont. The advantage of using the same questionnaire across states is that it facilitates collaboration between states, and consequently, enhances survey administration, data analysis, and data utilization processes.

To allow for comparability with other States' data, Alabama was required by CSAP to use a self-administered paper survey to collect data. Survey responses were scanned using an optical scanning machine and transferred into a database, where they were

stored and analyzed. Even if Alabama were allowed to consider other modes of survey administration, this was the most feasible method of data collection, given the large number of participants included in the study. Other survey administration methods (i.e., telephone, mail, or Internet) were deemed impractical due to financial and time concerns. For example, a telephone survey would have required that respondents be available at a specific time at a place where a telephone was accessible. To ensure successful implementation, the use of a telephone survey would have involved more extensive and costly coordination between the respondents and the SASD than the school-administered survey. Additionally, some data suggest that mode effects may impact drug use survey findings (e.g., Aquilino, 1994; Aquilino & Lo Sciuto, 1990). In particular, telephone-administered surveys may yield spuriously lower prevalence rates of drug use than self-administered surveys. Although a mail survey would have reduced the schools' scheduling burden, the financial cost and time required to execute this mode of data collection proved to be a significant barrier to implementation. An Internet-based survey would have afforded convenience only to those persons who had access to a computer. According to 2000 data from the Computer and Internet Use Supplement to the Current Population Survey (Employment Policy Foundation, 2001; cf. United States Bureau of the Census, 2001), only 44.6% of Alabama's households owned a computer and the Internet. Racial disparities in computer ownership among Alabama's population may have adversely affected survey response rates if an Internet-based survey were implemented (Bosman & Chakraborty, 2001). Using computers at school to complete an Internet-based survey would have posed a substantial challenge as well, since there were an average of 8.6 students per Internet-connected computer in Alabama, according to 2001 data (Education Week, 2002).

LITERATURE REVIEW

Patterns of alcohol, tobacco, and other drug (ATOD) use among adolescents have been established by examining empirical data acquired via epidemiological studies such as the Monitoring the Future (MTF) study, and from longitudinal studies (e.g., Denver Youth Study; Rochester Youth Development Study). MTF, a national survey conducted at the University of Michigan, has yielded ATOD prevalence data from students in grade 12 since 1975 and from students in grades 8 and 10 since 1991. Taken together, MTF data from the last decade suggest that while increases in substance use were observed during the first half of the 1990s and in many instances reached peak levels between 1996 and 1997, the rates of substance use have generally declined over the second half of the 1990s. For example, between 1996 and 2002, the 30-day prevalence of cigarette smoking decreased from a peak of 21% to 11% for 8th graders and from a high of 30% to 18% for 10th graders; similarly, the 30-day prevalence of cigarette smoking for 12th graders reached a peak of 37% in 1997 and subsequently declined to 27% in 2002 (Johnston, O'Malley, & Bachman, 2002).

While these data indicate that the rates of initiation of use and current use may have decreased for certain types of substances, they do not suggest that resources targeted toward prevention should be diverted. Indeed, increases in substance use may eventually emerge as a result of practices employed during a period of decline in use. For example, antidrug advertisements and media coverage of drug abuse have been shown to be less prevalent as substance use decreased; this decrease in antidrug messages may be associated with decreases in youths' disapproval of drug use and perception of risk from drugs and may contribute to an upswing in the pattern of drug use (Bachman, Johnston, & O'Malley, 1998). If a vulnerable segment of the population, particularly younger adolescents, is not exposed to ample drug prevention messages and programs, then this pattern of decline will be more likely to reverse itself (Harrison, 2001).

Data from MTF and a number of longitudinal studies such as the Denver Youth Study and the Rochester Youth Development Study suggest that there is a developmental pattern of drug use, such that the prevalence of use generally increases with age. This pattern is especially pronounced in cigarette smoking and alcohol consumption data sets. For example, 2001 MTF data indicated that approximately one half of 8th graders, 70% of 10th graders and 80% of 12th graders had initiated alcohol use, as determined by lifetime prevalence rates (Johnston, O'Malley, & Bachman, 2002). Additionally, major increases in cigarette smoking lifetime prevalence are observed with age, as 37% of 8th graders, 53% of 10th graders, and 61% of 12th graders reported having initiated smoking behavior in the 2001 MTF study. A notable exception to this consumption pattern is the developmental trend of inhalant use, where prevalence was higher among 8th graders than among 10th or 12th graders (Johnston et al., 2002). Additionally, developmental trends are observed in the progression of the types of substances used. Generally, younger adolescents tend to first experiment with alcohol use followed by cigarette and marijuana use and then graduate to other substances such as cocaine (e.g., Kandel, Yamaguchi, & Chen, 1992; Costello, Erkanli, Federman, & Angold, 1999), supporting

the notion of the initiation of smoking and alcohol consumption behaviors as a precursor or “gateway” to other drug use.

Epidemiological studies assessing the prevalence of substance abuse and other problem behaviors have been informed by a line of social research that has sought to determine the factors underlying and establish theories predicting the development of these behaviors. The emergence of risk and protective factor theories can be ascribed to the seminal research of Hawkins and colleagues (e.g., Hawkins, Catalano, & Miller, 1992; Hawkins, Lishner, & Catalano, 1985), which established that risk factors could be roughly divided into two categories: contextual factors and individual and interpersonal factors. Contextual factors, such as neighborhood disorganization, comprise the societal issues and cultural milieu that are related to the establishment of normative behaviors and the development of laws, such as those concerning the taxation of alcohol and cigarettes. Individual risk factors include personal characteristics, such as genetic constitution and rebellious tendencies, while interpersonal factors are concerned with a person’s experiences in school and interactions and relationships with family members and peers. One of the more influential interpersonal risk factors for substance use appears to be association with deviant peers (e.g., Deković, 1999).

When developing models to predict substance use, some researchers have used an aggregate index summing the total number of risk factors that does not consider the relative importance of each factor (Newcomb & Felix-Ortiz, 1992; Pollard, Hawkins, & Arthur, 1999). More specifically, these lines of research suggest that the sheer number of factors predicts substance use such that the more risk factors an adolescent experiences, the more likely it is that the adolescent will engage in drug use. While the use of this type of unweighted risk factor index has been successfully employed in some studies that have found that a composite measure of risk accounted for some proportion of substance use, more research needs to be done to determine if some risk factors are better predictors of substance abuse and should therefore be weighted more than others. Risk or protective factors that are demonstrated to be of little predictive value (e.g., self-esteem, self-efficacy; Gottfredson & Koper, 1996) should not be incorporated into a model associating risk with drug use. Additionally, structural equation models (e.g., Leech, Day, Richardson, & Goldschmidt, 2003; Li, Pentz, & Chou, 2002; Wills, Sandy, & Yaeger, 2002; Lynskey, Fergusson, & Horwood, 1998) may be used to uncover latent factors and modifying factors of substance use and other delinquent behaviors.

Although it may be possible to reduce the prevalence of some risk factors, such as gang involvement and academic failure, other factors, such as high community transitions and mobility and a family history of antisocial behavior, are not amendable, particularly from the vantage point of youths. Given that some risk factors cannot be changed, assessing the prevalence and potential augmentation of protective factors is of particular importance. Research indicates that protective factors, such as opportunities and rewards for prosocial involvement, religiosity, and perceived risks of drug use can buffer the harmful effects of risk factors (e.g., Smith, Lizotte, Thornberry, & Krohn, 1995). Whether protective factors work by exerting a direct influence on substance

abuse outcomes or by mediating the relationship between risk factors and substance use outcomes remains unclear.

Given that both risk and protective factors have been recognized as variables that can influence the likelihood of substance use and the development of other problem behaviors, it is of paramount concern that prevention programs be devised to both minimize risk factors and maximize protective factors. Also, since no single factor has been identified as predominantly accounting for adolescents' drug use, programs that address several factors and target different levels (i.e., individual/peer, community, family, school) are optimal (e.g., Hawkins et al., 1992; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999). Findings regarding interactions between risk and protective factors suggest that there is a complex relationship between these variables that prevention programs should take into account; however, it seems that particular emphasis should be given to minimizing risk factors, as some research suggests that protective factors have little buffering effect when the number of risk factors is maximal (e.g., Newcomb & Felix-Ortiz, 1992; Pollard et al., 1999).

METHODOLOGY

INSTRUMENTATION

The Alabama Student Survey was adapted from the Communities That Care (CTC) survey that was created for CSAP by a group of six states in collaboration with the Social Development Research Group (SDRG) at the University of Washington. Alabama made no substantive modifications to this survey (i.e., all CSAP questions were used) so that Alabama's data could be both compared and combined with other states that have administered the Six-State Consortium survey. The survey was designed to measure youth substance use, including alcohol, tobacco, and other drug use. More specifically, the substances included marijuana, LSD/psychedelics, cocaine/crack, and inhalants. The survey also measured the risk and protective factors for substance use that students face each day. In the literature, these factors are typically divided into four main categories: Peer/Individual, Family, School, and Community. The questionnaire was printed on a paper booklet that could be machine scanned and comprised 130 questions, some of which had more than one part. Students used pencils to fill out the questionnaire. A copy of the instrument is included in Appendix A and a table containing the names of the variables assessed in the survey can be found in Appendix B.

Prior Uses of Instrument and Validation Research

The survey instrument developed and validated by the Six-State Consortium was used in this project. This validated instrument is required by CSAP for prevention needs assessment studies and has been used by many states in the Prevention Needs Assessment project, including Arizona, Arkansas, Colorado, Florida, Kansas, Louisiana, Maine, Michigan, Montana, Oregon, Tennessee and Vermont. Over 90,000 individuals have completed the core items of the questionnaire in the consortium States alone.

The instrument has been shown to be generally reliable across gender, grade (6, 8, 10, 12), and ethnic groups (Center for Substance Abuse Prevention, 1999). In addition, risk and protective factors such as those measured by this instrument have been validated across gender and ethnic groups by Gottfredson and Koper (1997). The authors assessed the degree to which program effectiveness measures that are not culturally specific are equally reliable and valid predictors of delinquency across gender and ethnic groups. Data were collected from adolescents enrolled in grades 6 through 12 who were African Americans, Caucasians, Hispanic Americans, Asian Americans and Native Americans. Reliability was assessed with congeneric measurement models, while validity was assessed with structural equation models. The result was that the measures of risk and protective factors were invariant across gender and ethnic groups.

Construct validity of the domains (school, community, family, peer/individual) is described later in this report. A table of inter-item correlations can be found in Appendix C.

Subscale Reliabilities
To determine the reliability of the risk and protective factor scales, Cronbach's alpha (unstandardized) was calculated. More specifically, this inter-item reliability analysis was conducted to ascertain how consistent the results were for different scale items for the same construct. Scales that were determined to be unreliable were not subjected to further analyses.

Cronbach's alpha coefficients were computed for all scales except for religiosity and social skills. The religiosity scale comprises only one item, therefore there is no inter-item reliability. The social skills scale itself was not calculated due to coding issues (i.e., the answer choices did not necessarily correspond to gradations in social skills).

Alpha values ranged from 0.42 to 0.88 (Appendix D). A cutoff criterion of 0.6 was used to establish whether or not a particular scale was internally consistent. The impulsivity scale was the only scale that did not meet the cutoff criterion and therefore was not included in subsequent analyses.

Pilot Tests
The instrument was pilot tested in the fall of 2001 on five female adolescents who were participating in a treatment program at Caritas House, a substance abuse treatment facility for female adolescents located in Pawtucket, Rhode Island. Pilot testers were asked to focus on the survey layout and formatting. Participants took between 35 and 50 minutes to complete the survey and remarked that the survey was similar to most other surveys that they have had to fill out. The results of the pilot test did not indicate that any layout or formatting changes were necessary, therefore, none were made. Participants did comment that some questions seemed to be repeated throughout the survey. Some respondents found it difficult to answer some of the questions because they did not live with the same set of adults consistently while they were growing up.

Review for Multicultural Sensitivity
Reliability data for the Six State Student Survey Scales (Center for Substance Abuse Prevention, 1999) suggest that within each scale, the reliabilities of the scales are generally similar for each racial/ethnic category. Notable exceptions to this pattern are evinced by the family conflict, family attitudes toward ATOD use, and low school achievement scales, which demonstrated more disparate reliabilities for different racial/ethnic groups. The possible discrepancies in measurement validity and/or reliability between races/ethnicities require further exploration (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002).

SAMPLING METHODOLOGY

Respondent Universe

The respondent universe is public school students in Alabama in grades 6 through 12. The universe includes students in alternative schools but excludes students in training schools, which are not administered by the Alabama Department of Education. According to enrollment statistics, the size of this universe was 375,719 students in 2001. The size of the universe is likely to be similar for 2002, the year in which this survey was conducted.

Sample Frames

A two-stage sampling procedure was employed, using a different frame for each stage. In the first stage, the number of classes to be surveyed in each school was selected, using an enrollment database provided by the Alabama State Department of Education. In the second stage, specific classes to participate from each school (e.g., Ms. Smith's second period class) were selected. The sampling frame for each school was created from rosters of classes provided by participating schools. A copy of the roster appears in Appendix E.

Strata

The Alabama Department of Mental Health and Mental Retardation (DMHMR) was awarded funding by CSAP to survey students in grades 6, 10, and 12. The sample was to be stratified by grade within each of the State's four health planning regions. When officials from DMHMR met with the State Department of Education (SDE), the SDE expressed interest in increasing the number of strata. Specifically, the SDE wished to obtain county-level estimates for each grade in grades 6-12. This level of estimation would require sampling seven strata (one per grade) in each of Alabama's 67 counties, for a total of 469 strata. Realizing the value of these estimates for prevention planning, the DMHMR agreed to this sampling scheme and contributed its own funds to pay for the increased size and scope of the study.

Required Sample Size

There is a direct relationship between sample size and the variability of an estimate. Increasing the sample size will decrease the variability of the estimate and its associated confidence interval (Kish, 1965). The sample was designed so that the 95% confidence intervals would lie within ±5.3% of the county survey estimates. Smaller levels of precision resulted in sample sizes that were unacceptably large and burdensome to the SDE. Kish (1965) provides a formula for computing the required sample size for a survey. The formula takes the sampling method into account and contains a correction for finite populations. According to Kish's formula, the desired sample size for a precision of ±5.3% is as follows:

$$\frac{p*(1-p)}{(.053/1.96)^2+(p/N)} * \text{Design effect}$$

In the formula above, the letter p stands for the estimated prevalence rate, while the letter N stands for the number of students in the stratum. The researcher needs information on p, N, and the design effect in order to calculate the desired sample size. The design effect is a correction for the sampling method. Instead of sampling individual students, entire classes of students were sampled. The design effect accounts for the fact that students in the same class are usually more alike than students in different classes.

The enrollment database provided by the SDE was used to calculate the number of students in each stratum. Since estimates of prevalence were not available before conducting the survey, a prevalence rate of 50% was assumed. When the prevalence rate is 50%, the numerator in the formula is maximized, leading to the largest possible sample size needed. Thus, this assumption ensures an adequate sample size even if the actual prevalence rate turns out to be smaller or larger.

Computing the design effect requires estimates of the intraclass correlation (ICC) and the average class size. An estimate of class size was obtained from a publication by the U.S. Department of Education (Snyder & Hoffman, 2001). According to this source, the estimated average class size for Alabama was 24 students. The ICC between students in Alabama was unknown, but estimates from surveys conducted in other States have shown the ICC to be approximately 0.02 (R. S. Harrison, personal communication, May 30, 2000). Using these estimates, the design effect was 1.46.[1]

The desired sample size was calculated by substituting the assumed prevalence rate, estimated design effect, and number of students into the original formula. Since the number of students is different in each grade and county, each stratum will have a different desired sample size. Appendix F shows the number of students in each stratum and the desired sample size to sample. The sample size is expressed in terms of students. The total number of students across the entire state was 133,451. Since the sampling unit in the study is the classroom, the number of desired classes required may also be of interest. This figure can be obtained by dividing the entries in the table in Appendix F by 24, the average class size.

Anticipating Non-Response

In a student survey, non-response can come from several different sources, such as school officials, teachers, parents, and individual students. This non-response can decrease the sample size and thereby reduce the precision of the survey. In order to avoid this effect, it is necessary to approach more students than are needed. It was estimated that the project would obtain surveys from 70% of the students approached. Dividing the desired sample size by this estimate yielded the total number of students to approach. Dividing this number by the average class size provides an estimate of the number of classes to approach. Occasionally, the number of classes to approach exceeded the total number of classes in the county. In these cases, the plan was to approach all available classes.

[1] The formula for the design effect is as follows: effect = ICC*(Class size -1)) + 1.

Sample Selection Method

There were two stages to the sample selection procedure. In the first stage, the number of classes to sample in each school was selected. The second stage entailed selecting the actual classes. To select classes, the number of classes in each grade and school was estimated. This estimate was created by dividing the number students per grade in each school by the average class size and rounding the resulting number. Some schools reported having fewer than 24 students in the entire grade. If the number of students was between 6 and 23, it was estimated that there was one small class. If there were five or fewer students, there were no eligible classes in that grade.

After estimating the number of classes per grade and school, the number of sampled classes in each school was randomly selected. Each school received a set of electronic lottery tickets for each grade. The number of tickets was equal to the estimated number of classes in the relevant grade for that school. All lottery tickets for a particular stratum were then placed in an SPSS file to form an electronic "hat" of classes. An SPSS computer program randomly drew a set of lottery tickets from the hat. The number of tickets drawn equaled the number of classes the project planned to sample in the stratum. By recording the school corresponding to each selected lottery ticket, the computer calculated the number of classes selected in each school for the corresponding stratum. Repeating this procedure across all strata yielded the number of classes sampled in each school and grade.

In the second stage, classrooms were selected. Participating schools completed a roster of second period classes. The roster instructed school staff to enumerate each second period teacher, along with the grade taught and the number of students. The State forwarded the completed rosters to the subcontractor, where a research assistant entered them into an electronic database. Before selecting classes, a research analyst reviewed the rosters, corrected any errors found, and determined which classes were eligible. A class was deemed *ineligible* if it met any of the following criteria:

- The class contained 5th graders. (The questionnaire was not appropriate for 5th graders)
- The class was a special education class
- The class contained special needs students who were physically or mentally unable to take the survey
- The class contained 4 or fewer students
- The class contained between 5 and 9 students, and there were only 4 or fewer classes of this size in the school.

A computer program then randomly selected classes from each electronic roster[2]. The number of classes selected for each grade and school was equal to the number selected in the first stage. In some cases, classes had students from several grades, complicating the grade-by-grade selection process. Eliminating these classes from the pool of eligible classes was not feasible, since it could have seriously biased the sample. Instead, several methods were used to ensure that an adequate number of classrooms were chosen at random with a known probability. Methods included assigning classes to the grade with the most students, randomly assigning classes to a grade, and selecting classes for several grades from a pool of mixed-grade classes and single grade classes.

Methods Related to Non-Response

The State hired a special survey coordinator who worked with the State project manager and subcontractor to maximize the response rate. The State coordinator and project manager coordinated with school officials at the State, district, system, and school level during every stage of the project. Highlights of this endeavor include:

- Presenting the survey at State and district meetings of superintendents and principals
- Publishing an article about the survey in a State education newsletter
- Following up with superintendents and principals who declined to participate
- Sending reminder faxes and postcards to participating schools regarding survey dates
- Telephoning contacts at participating schools that did not send completed surveys back by a certain date

Despite these efforts, there were several counties in which a major school system declined to participate. When this occurred, the number of students sampled from the remaining systems was increased to compensate for the loss in sample size. Although this increase could not make the sample representative of the missing school systems, it helped boost the precision of the sample.

Methods Related to Incomplete Surveys

The approach to incomplete surveys was to utilize as much of the information as possible. An algorithm scanned the data for evidence of dishonest reporting and eliminated these cases from the analysis. This algorithm is described in detail later in this report. Any questionnaire that passed the algorithm was eligible for analysis, irrespective of its completeness.

[2] Some counties had a higher school response rate then anticipated. Because the Department of Education stressed the importance of not overburdening schools, a few classes in these counties were randomly "de-selected" before the final stage of sample selection.

Data from incomplete questionnaires were treated in the same manner as other missing data. Values for the risk and protective factor scale scores were imputed. The missing value was assigned the mean of the non-missing values on the same scale. When computing scale scores, missing values were imputed for a particular scale only when at least 90% of the items for that scale were answered. Scores were not calculated for a particular scale if the student did not answer the threshold number of items. The scale scores were the only variables with imputed missing values.

Justification of Methodology in Terms of Study Goals

The goal of this study was to obtain estimates of risk, protection, and substance use by planning region for grades 6-12 in each county. The sampling method was designed to produce valid and precise estimates for each stratum. Standard formulae were used to calculate the required sample size, taking into account the design effect and small population sizes. The classroom selection method ensures that classrooms are randomly selected with a known probability, as recommended by Kish (1965). Furthermore, the sample design anticipates non-response using the most conservative estimate acceptable to the State, and there was a large investment in intensive efforts to encourage participation.

Representation and Ability to Generalize

Sampling all counties and all grades will yield a sample that is highly representative of students in mainstream public schools. Other students have less representation in the sample. Most notably, private school students are excluded from the sample. Little is known about the prevention needs of this population, and results from this study may not apply to private school students.

Youth in training schools are also excluded from the study universe. Alternative schools were eligible for the study, but most of their classes were ineligible due to their small sizes. Thus, alternative schools are most likely underrepresented in this sample. These groups may be at greater risk of developing problems related to substance abuse and could have greater prevention needs than the mainstream population surveyed in this study.

Students with special needs are a very small part of Alabama's student population, and were not surveyed. Schools for the physically handicapped and developmentally disabled were excluded, as were most special education classes. These students have important prevention needs, but it would not be prudent to give them a survey that had not been tested among their peers.

DATA COLLECTION

Sample Design Execution

Cases chosen

The sample fraction in most of the sample strata was very high. As a result, a high proportion of Alabama's schools were sampled. Of the 952 schools with students in grades 6-12, a total of 812 schools were selected and eligible. This sample is highly representative of both small and large schools in Alabama. Small alternative schools are the exception, as previously described. The smaller alternative schools were not likely to be selected because few classes were large enough to be eligible.

At the class level, there is a slight bias away from very small classrooms. The SDE and DMHMR were very concerned about revealing the identity of individual students, particularly in Alabama's smaller counties. To protect anonymity, classrooms with fewer than five students were deemed ineligible. Furthermore, classes with between five and nine students were only eligible if there were five or more classes of this size in the school. The rationale for this procedure was that concerns for anonymity overrode the potential for introducing bias. In practice, there were very few ineligible classes in the State.

Response rates

Although the sample design was balanced and representative, some schools and students selected declined to participate. Table 1 displays the response rates, both across the four health planning regions and Statewide. The Statewide response rate was 56%, while the regional response rates ranged from 47% to 65%. While these response rates appear to be rather low, they are in line with those obtained in other school surveys (e.g., combined response rates of 43%, 45%, and 52% for 8th, 10th, and 12th graders for 1994 -1995 MTF; see Gfroerer, Wright, & Kopstein, 1997). Like these other surveys, they signify that the results from the study may not apply to non-participating schools and students. In other words, there may a non-response bias,[3] although some lines of research suggest that school non-participation does not introduce substantial bias to prevalence estimates of substance use (e.g., Gfroerer et al., 1997; Johnston, O'Malley, & Bachman, 1996).

[3] It is difficult to speculate on the direction of the non-response bias. On the one hand, schools and students could decline to participate in order to avoid revealing their problems. On the other hand, they could also decline because the lack of problems in their community made the survey a low priority.

Table 1. Response Rates

	Statewide	Region 1	Region 2	Region 3	Region 4
Schools					
Selected	812	258	212	168	174
Ineligible	8	3	4	0	1
Refused	203	45	52	60	46
Other non-participants	18	5	7	2	4
School Response Rate	**73%**	**79%**	**72%**	**63%**	**71%**
Youth					
Selected	120,515	37,074	29,828	26,681	26,932
Refused/Absent	24,444	5,888	5,959	6,232	6,365
Discarded	3,249	947	807	833	662
Youth Response Rate	**77%**	**82%**	**77%**	**74%**	**74%**
Overall Response Rate	**56%**	**65%**	**55%**	**47%**	**53%**

Weighting

Weights were created to ensure that the proportion of weighted respondents in each stratum roughly matched the proportion of actual students in the stratum. This task was completed with the assistance of the University of Illinois Survey Research Laboratory. The final sample weight was calculated by multiplying a sample selection weight, a non-response weight, and a post-stratification weight. The sample selection weight is simply the inverse of the probability of class selection. The weight is specific to each school and grade. To compute the non-response weight, the ratio of actual respondents to targeted respondents was calculated. The inverse of this number is the non-response weight. Each grade within each county received its own non-response weight.

The post-stratification weight adjusts the weighted data to ensure that strata are not disproportionately represented in the sample. Each grade within each county received a separate post-stratification weight. Weights were based on the most recent enrollment data, which were from 2001. After weighting the data, the weighted data were compared with enrollment data on race and gender. The comparison revealed that the weighted sample adequately reflected the age and gender composition of Alabama's population. This issue is discussed in more detail in a later section.

Consistency of Data Format, Availability, and Quality across Substate Areas
Format

A portion of this project was paid for by funds from the CSAP Prevention Needs Assessment. The Office of Management and Budget requires federally funded surveys

to place a control number and statement of burden on the front page of the questionnaire. The control number and burden statement were placed on questionnaires funded by federal funds and distributed to a random subset of sampled classes. To ease the task of preparing survey packages sent to schools, these were printed in purple ink. The remaining questionnaires were printed in blue ink.

The questionnaires marked with a control number and burden statement account for less than 3% of the total sample of questionnaires. Nevertheless, the data were examined to detect mode effects. The evidence showed that mode effects would likely have a negligible effect on the survey estimates. Overall, 2.6% of the questionnaires with the burden statement were discarded (due to poor quality data), while 4% of the regular questionnaires were discarded. More importantly, there were only very small differences in the reporting of lifetime substance use (less than 2%). Neither questionnaire appeared to consistently produce higher rates of substance use. Given the large sample size, even miniscule differences can reach statistical significance, although they may not necessarily be of practical importance.

Availability: County-level response rates

The availability of data was not uniform across the State, due to differing response rates among counties. Out of 67 counties in Alabama, 23 counties achieved response rates of 70% or greater. Another 8 counties obtained rates between 60% and 70%. The response rates for the remaining counties were lower. Twenty counties achieved response rates between 50% and 60%, while 16 counties obtained response rates of less than 50%. This variation means that geographic comparisons should be made cautiously, since the non-response bias may be larger in counties with lower response rates.

To examine geographic patterns in participation, response rates were mapped using a Geographic Information System. This map appears in Appendix G, Figure G-1. The map is color-coded so that blue shades signify response rates of 50% and above. The darker the shade of blue is, the higher the response rate. Red, orange, and yellow shades indicate response rates below 50%. The response rate falls as the color shifts from yellow to red. A striking feature of the map is the tendency for response rates to be lower in southern parts of the States. This characteristic is especially apparent in the horizontal band of yellow counties stretching across the State.

Quality

<u>Completion Rates</u>
Completion rates are one measure of data quality. A data manager calculated the percentage of respondents in each county who did not answer the final question on risk and protective factors. This measure was intended to provide a general sense of how many students did not complete the survey, although there may be some students who simply skipped this particular question. Figure G-2 in Appendix G displays the results in the form of a map. Counties with lower rates of incomplete surveys are depicted using

blue shades, while counties with higher rates of incomplete surveys are depicted using red and yellow shades. The completion rates are much higher than the response rates, and the disparity between the northern and southern parts of the State is less pronounced. However, there is a horizontal band of counties with lower completion rates in the southern part of the State. This band resembles the band that appears on the response rate map, although some counties do not appear in both bands.

Another striking feature of the map is Sumter County, which appears in red on the western edge of the State. Sumter was the only county in the State with an incompletion rate above 40%. The cause of this low completion rate appears to be a junior high school with extremely low completion rates. Since the county is small, the school accounted for a large portion of the sample and heavily impacted the overall completion rate.

Discarded Surveys

Dishonest reporting is another measure of data quality. Surveys were discarded when dishonest reporting was suspected. The methodology for determining which surveys appeared dishonest is described in the section entitled "Data Quality Control Procedures." In brief, measures of dishonesty include exaggeration of substance use, inconsistent answers, and self-reports of providing dishonest answers. The percentage of surveys discarded in each county were calculated and appear on a map in Appendix G. The percentages were generally small and ranged from approximately 1.4% to 7.7%. Blue colors represent lower rates of discarded surveys, while red and yellow colors represent higher rates. Encouragingly, the majority of counties are shown in blue. The lowest rates of discards appear in the northern third of the State and along the Florida panhandle. Another noteworthy feature of the map is the cluster of four red counties towards the western end of the State. Approximately 7% of the surveys in these counties were discarded, indicating that data quality was more of a problem for these four counties.

Consistency of Data Availability, Quality, and Format Over Time

Schools signed up to administer the survey on Tuesday, Wednesday, or Thursday of any week between January 22 and February 14 of 2002. In practice, a few schools were not able to administer the survey in February and administered the questionnaires in March instead. It would have been preferable to offer the survey on any week in February, but a conflict with other tests prevented the project from adopting this schedule. Standardized testing begins in late February and extends through April. The State was concerned that the survey would interfere with preparation for the tests and decided to limit the administration period to mid-February.

The survey administration dates may introduce a seasonal effect for some schools. The research literature suggests that alcohol and other substance use increases among adults during the Christmas and New Year holidays (e.g., Lemmens & Knibbe, 1993; Uitenbroek, 1996; Cho, Johnson, & Fendrich, 2001). The same effect may also be present for adolescents. If this effect is present in the data, it would affect the past 30-day use rates among students who completed the survey in January, but not among

students who completed the survey in February. Thus, some caution is necessary when interpreting the data on past 30-day use.

Administration Plan
Project coordinator

The subcontractor, DATACORP, trained the project coordinator on the various aspects of the study and responsibilities of the coordinator. Among the project coordinator's responsibilities were monitoring the progress of the survey, eliciting school participation, identifying contacts at the schools who would assist in administering the survey, working with the school contact person to select a survey administration date, preparing survey materials (e.g., parental letters, teacher letters), training teachers, and delivering and collecting survey materials from the schools. To ensure that the survey would be administered correctly, the coordinator sent teacher letters and survey administration protocols to the school contacts, who in turn gave them to the teachers. The protocols contained step-by-step survey administration instructions (Appendix H). Teachers were informed that they should consult their school contact if they encountered any problems regarding the administration process. Additionally, the coordinator met with all of the school contacts to train them on survey administration and prepare them to answer questions from teachers regarding survey administration. The coordinator provided each participating school (via the school contact) with a package containing all the supplies necessary to administer the surveys. The package contained survey administrator (teacher) instructions, surveys, envelopes for completed surveys, and pencils with erasers.

Survey Administration Procedures
To start the survey administration process, all school superintendents received information about the study and were asked to allow the schools in their district to participate. If superintendents approved their district's participation, the State mailed packets of information to the principals of all schools selected through the sampling process. These packets contained information about the survey and its administration, along with a blank class roster for them to complete and a form asking them to choose a day for survey administration. Efforts were made to maximize response rates. Superintendents and principals who did not respond were faxed a reminder about the survey, and a second mailing was conducted to solicit additional participation. The project coordinator made phone calls to schools from who did not initially respond and attempted to secure their participation.

School principals in those districts that received superintendents' approval were given a 4-week window from the last two weeks of January 2002 to the first two weeks of February 2002 during which they could elect to administer the survey. Within each of these weeks, principals were allowed to administer the survey on Tuesday, Wednesday, or Thursday. Monday and Friday were excluded because anecdotal and some empirical evidence (Bos & Ruitjers, 1992) suggest they are the days with the highest student absence rates. The survey was administered to second period classes to ensure that adolescents who were late to school would not miss or fail to complete the

survey. School principals also received a list of classes that had been selected to participate.

Consent and Privacy Concerns

On the day of the survey, survey administrators distributed participation assent forms, survey questionnaire booklets, and pencils to the students. Students had one class period (typically 45 minutes) to complete the survey. At the end of the period, students put their survey booklets back into the envelope they came in, and the envelope was sealed to further protect student confidentiality. Schools returned these envelopes to DATACORP using the provided pre-paid label. Survey respondents did not receive any money or any other form of compensation for their participation in the project.

Passive consent was used to garner parental permission. That is, those parents who did *not* wish their children to participate in the study were required to notify school personnel. Parents received an information sheet ("parental letter"; see Appendix I) that described the rationale for the study, nature of the survey questions, and steps taken to afford respondent confidentiality. This parental consent form emphasized that participation was voluntary and stated that parents could decline to consent. Students whose parents declined to give consent were instructed to read or work quietly at their desks while other students were completing the survey.

Prior to beginning the study, students received participation assent forms (see Appendix J), which stressed the anonymous and voluntary nature of the survey and outlined the strict confidentiality policy governing the study. Survey administrators, typically classroom teachers, read the assent form aloud while the students followed along. In addition to delineating the efforts to maintain confidentiality and the absence of penalization for lack of participation, the assent forms also described what types of questions the survey asked and let students know they could skip any question they did not feel comfortable answering. Since participants could refrain from responding to any question they did not feel they could answer comfortably, the effect of this type of nonresponse on survey response rates is unknown.

Several measures were taken in an effort to ensure confidentiality on the part of survey participants. There were no unique identifiers at the individual level on the survey itself, and students were instructed not to write their names or any other uniquely identifying information on the survey. To protect against the possible loss of anonymity, survey administrators were asked to arrange class seating and to administer the survey in a manner so that no one else would be able to see the student's responses while they were completing the survey. Additionally, survey administrators were instructed to remain stationary in the classroom while the students were completing the survey, so as to minimize the likelihood that an administrator would be able to make identifying connections between surveys and the respondents who completed them. Upon completing the questionnaire, students were instructed to put their surveys back into the envelope they came in, and the envelope was sealed to further protect student confidentiality. Data were aggregated at the county level, affording individual students

additional anonymity; this point was also explained to students as part of the informed consent process.

Data Quality Control Procedures

Optical scanner

Once boxes of completed questionnaires arrived, blank questionnaires were removed. The booklets were scanned by means of an OpScan 6/50 OMR scanner from NCS Pearson using Scan Shop software from Scanning Systems. The computer employed to save data was a Gateway running Windows 98 SE. The scanner was operated at all times by trained staff.

Booklets were scanned one class at a time, with the software automatically saving all data after each class was finished. When there was a scanner error, such as a paper jam, a skewed sheet, or too many sheets going through at once, the stack of papers was reset by the operator and the process was restarted. Some types of errors caused unsaved data to be lost. In these cases, the data file was checked to make sure that only the current class was missing. The stack was reset and rescanned. Any time a booklet was rescanned, it was because the information on it had not been saved. In this way, the same booklet was prevented from appearing twice in the database.

The nature of the instrument, a scannable booklet, prevented data entry errors from appearing in the responses. The scanner was tested before beginning the scanning process and was found to be extremely accurate. There were no known errors caused by the scanner reader heads.

Some booklets that did not scan properly were found to have extraneous pencil markings along the outside edge near the timing marks. The timing marks are black marks printed on the booklet that are used by the scanner to indicate what parts of the booklet to scan, and to identify the booklets as they pass through. When these extraneous marks were found, they were erased by the operator, and the booklet was rescanned.

At the end of each day of scanning, the data for that day were converted from a proprietary Scan Shop file format to a tab-separated value file, which was saved on two computers and backed up to a tape. When the scanning process was concluded, the tab-separated value files were converted, using SPSS scripts, to SPSS formatted files. These files were then combined into a single SPSS file using another script. Additional SPSS scripts were developed to make other changes to this file, including adding variable names and labels, adding value labels, changing the variables from strings to numeric variables, and changing multiple-response values from an asterisk (generated by the scanner) to a numeric code. Other scripts eventually added school names, class numbers, and counties from the post-processing database. A data dictionary that describes questionnaire items can be found in Appendix K.

Booklets and backup tapes were kept in secure locations (in a locked room and in a locked safe, respectively). Once loaded onto the computer, data were stored on a secure server using procedures to maintain data integrity. The data manager was responsible for all programming used to format and analyze the data and was the only party with saving and editing rights to the working copy of the data set. All other analysts and staff had "read-only" access to the data. In order to adequately keep track of all data transfers and changes, the data manager was also responsible for developing a manual that documented any manipulations to the data set.

Self-report

The difficulty in drawing meaningful conclusions from self-reported data lies in the validity of the obtained information. To encourage honest reporting, surveys were administered to maximize anonymity and confidentiality on the part of the respondents. While the integrity of the data was enhanced by these measures, it is likely that some surveys contained false data. To ensure the highest quality data possible, steps were taken to examine the validity of the responses and removed surveys that appeared to have been completed dishonestly. First, surveys where students indicated that they were *not honest at all* were eliminated from the sample. Second, surveys where students indicated that they had used a fictitious drug both during their lifetime and in the last 30 days were removed. The reported use of "Derbisol," the fake substance, was thought to indicate dishonesty on the part of the survey participant. Similarly, surveys where students self-reported heavy drug use to an unlikely extreme, suggesting fraudulent data, were excluded. Surveys where students reported having used LSD, crack/cocaine, inhalants, and "other drugs" (any other drugs not explicitly listed; e.g., heroin, steroids) at least 40 times in the last 30 days were discarded.

Additionally, there were multiple checks for logical inconsistencies in the data. For example, a student may have reported that he had never smoked a cigarette in his lifetime but that he smoked two packs of cigarettes a day in the last 30 days. A threshold was developed, and surveys with too many contradictory answers were also eliminated from the final dataset. Survey data from respondents who were inconsistent on questions regarding the use of two of the following four substances were excluded: alcohol, cigarettes, smokeless tobacco, and marijuana. Data were also excluded from respondents who were inconsistent on questions regarding the use of LSD/psychedelics, cocaine/crack, inhalants, and "other drugs"; for this criterion, data were excluded only if respondents were inconsistent with respect to all four drug categories.

A total of 96,071 surveys were returned. After the data were screened for quality, 3,242 surveys (3.4%) were discarded. Although data from survey respondents who had indicated they were dishonest or provided inconsistent answers on questions about certain types of substance use were excluded from analyses, data from incomplete surveys were retained in the database. Analyses revealed that approximately 68% of surveys in the sample contained blank responses for at least one item. Less than a third of the surveys were missing responses for ten or more items.

When computing each student's scores on the risk and protective factor scales, missing values were imputed for a particular scale only when at least 90% of the items for that scale were answered. The missing value was assigned the mean of the non-missing values on the same scale. Scores were not calculated for a particular scale if the student did not answer the threshold number of items.

Final Unit of Aggregation

A chart book (Appendix M) published in 2002 provided detailed results at the county-level. This report will focus on the broader picture. Results are presented at the State-level, with two exceptions. First, prevalence rates of substance use are reported for both the State and its health planning regions.[4] These results will allow planners to make simple geographic comparisons. Second, the prevalence rates of selected risk and protective factors are presented by county in the form of maps. These maps are intended to help local planners and were not published in the chart book because the methodology for calculating the prevalence rates had not yet been developed.

Limitations and Caveats

Sample characteristics

The Alabama Student Survey provides valuable information regarding the prevalence rates of substance use and risk and protective factors predicting drug use among Alabama's adolescents; however, as with any research study, there are limitations and caveats that must be heeded. The survey was administered only to public school students in Alabama. This qualifying characteristic effectively excludes students who do not attend public schools, such as youth who attend private schools or adolescents who are institutionalized, homeless, incarcerated, or who have dropped out of school. Estimates of adolescent substance abuse can be affected particularly by the inclusion of dropouts in the study sample, as most research examining the relationship between school attrition and drug use suggests that dropouts are more likely to use drugs than students attending school (e.g., Obot & Anthony, 2000; Guagliardo, Huang, Hicks, & D'Angelo, 1998; Swaim, Beauvais, Chavez, & Oetting, 1997). Given Alabama's overall 12% adolescent dropout rate in 2000 (i.e., a rate of 11,990/100,000 of Alabama's adolescents aged between 16 and 19 years had not completed high school and were not enrolled in high school in 2000; this statistic is regardless of *when* they dropped out), which ranged from 4% to 21% from county to county, the exclusion of school dropouts from the survey may impact findings, leading to an underestimate of the prevalence rates of substance use among Alabama's adolescents.

Data from public school students who were absent from school on the day that the survey was administered are not included; this could affect prevalence estimates in this study, as some research indicates that absentees, particularly truants, manifest high rates of drug use (e.g., Lloyd, 1998; Powers, Griffiths, Gossop, Lloyd, & Strang, 1998; Bachman, O'Malley, & Johnston, 1980; Kandel, 1975). Thus, the implications of surveying a particular subset of youths and restricted ability to generalize these findings

[4] A map of the health planning regions appears in Appendix L.

to all adolescents in the State of Alabama must be taken into account when interpreting the results.

Self-report validity

In addition to the limitations on generalizability imposed by survey respondent characteristics, one must also consider the issue of validity when self-report surveys are used, particularly when questions of a sensitive nature are posed. Generally, socially desirable behaviors tend to be overreported, while socially undesirable ones are underreported (e.g., Edwards, 1957; Harrell, 1985; Swadi, 1990). Comparisons of tests of biological samples (e.g., saliva, urine) with self-reported use data often reveal discrepancies such that self-reported data are determined to underreport actual substance use (e.g., Morral, McCaffrey, & Iguchi, 2000; Buchan, Dennis, Tims, & Diamond, 2002; Murphy, Durako, Muenz, & Wilson, 2000; Harrison, 1997). While some lines of research suggest that data obtained from adolescents' self-reports of substance use can be reliable and valid (e.g., Williams, Toomey, McGovern, Wagenaar, & Perry, 1995; Winters, Stinchfield, Henly, & Schwartz, 1990-1991; Martin & Newman, 1988), others indicate that adolescents tend to yield apocryphal responses (e.g., Pokorny, Jason, Schoeny, Curie, & Townsend, 2001; Buchan et al., 2002; Magura & Kang, 1996), more often by underreporting substance use than by overreporting it. Some studies employing school surveys point to exaggerated or inaccurate data when questions regarding substance use and/or delinquent/violent behavior are posed (e.g., Cornell & Loper, 1998; Rosenblatt & Furlong, 1997; Furlong & Morrison, 1994). As described earlier, measures were taken to enhance data quality in the current study by eliminating those surveys that were perceived to have been completed dishonestly. However, there is the possibility that some surveys containing invalid responses were included in the analyses.

Response rate

Data were systematically examined to ascertain if riskier communities had lower survey response rates. County-level response rates were correlated with a number of social indicators: juvenile drug arrests, juvenile alcohol arrests, juvenile property crime arrests, adult violent crime arrests, dropout rates, and an overall risk index that was created as part of the social indicator study. The only variable that significantly correlated with response rates was juvenile property crime arrests. Communities with lower rates of juvenile property crime arrests had higher response rates ($r = -0.28$).

Additionally, comparisons were made between county response rates and a number of social indicators to see if demographic patterns emerged. Only race had a significant correlation with response rates. As the Caucasian component of the racial composition increased, the response rates increased ($r=.25$).

Completion rates

A relationship between academic achievement and completion rates was observed. At the county level, incompletion rates correlated positively with the average Stanford Achievement Test Score ($r = 0.55$, $p < 0.0001$). This relationship appears to hold at the individual level. Students who reported receiving "mostly F's" (a question that appears at the beginning of the survey) failed to complete the survey 29% of the time. In contrast, students who reported receiving "mostly A's" failed to complete the survey only 12% of the time. This result may indicate that youths who are more at risk are less likely to complete the survey. The analysis of completion rates also indicated that Caucasian students were less likely than non-Caucasian students to submit an incomplete survey (13% vs. 30%).

ANALYSIS OF STUDY SAMPLE

FINAL SAMPLE CHARACTERISTICS

As previously described, the sample of completed and collected survey questionnaires was weighted to adjust for the probability of classroom selection, the stratum non-response rate, and the size of the stratum. This weighted sample of students was compared to the August 2001 Alabama Department of Education enrollment data (Alabama Department of Education, 2002). Results are presented as cross tabulations between 1) grade and gender, and 2) grade and race.

Table 2. Sample Gender by Grade Compared to August 2001 Enrollment Data

Grade	Gender	Aug '01 Enroll Count	Sample Count	Aug '01 Enroll % of Gender	Sample % of Gender	Aug '01 Enroll % of Grade	Sample % of Grade	Aug '01 Enroll % of Total	Sample % of Total
6	Male	30,539	26,763	15.89	16.04	51.92	47.73	8.13	7.55
	Female	28,285	29,339	15.41	15.61	48.08	52.27	7.53	8.27
7	Male	30,795	26,408	16.02	15.87	52.07	47.15	8.20	7.47
	Female	28,344	29,597	15.44	15.82	47.93	52.85	7.54	8.37
8	Male	29,402	24,507	15.30	14.73	51.78	45.66	7.83	6.93
	Female	27,385	29,164	14.92	15.58	48.22	54.34	7.29	8.25
9	Male	31,625	26,320	16.46	15.82	52.49	47.35	8.42	7.45
	Female	28,626	29,270	15.60	15.64	47.51	52.65	7.62	8.28
10	Male	26,204	22,941	13.64	13.79	50.52	47.45	6.97	6.49
	Female	25,665	25,411	13.98	13.58	49.48	52.55	6.83	7.19
11	Male	22,906	20,755	11.92	12.48	49.42	47.62	6.10	5.87
	Female	23,445	22,832	12.77	12.20	50.58	52.38	6.24	6.46
12	Male	20,709	18,752	10.78	11.27	48.73	46.41	5.51	5.30
	Female	21,789	21,652	11.87	11.57	51.27	53.59	5.80	6.12
Total	Male	192,180	166,361						
	Female	183,539	187,144						
	Total	375,719	353,505						

Results demonstrate that the weighted sample characteristics approximate August 2001 enrollment statistics. Within a particular gender, the breakdown of percentage by grade generally varied by less than 1% (max =0.66%). Within a particular grade, the ratio of males to females was frequently reversed in the weighted sample for lower grades (more males than females), but this ratio was so close to equal proportions that the reversal would have negligible impact. Overall, the weighted sample percentages for any one cell representing grade by gender varied by less than 1% (max = 0.97%) from August 2001 enrollment data.

Table 3. Sample Race by Grade Compared to August 2001 Enrollment Data

Grade	Race	Aug '01 Enroll Count	Sample Count	Aug '01 Enroll % of Race	Sample % of Race	Aug '01 Enroll % of Grade	Sample % of Grade	Aug '01 Enroll % of Total	Sample % of Total
6	White	35,607	32,111	15.41	14.97	60.53	57.12	9.48	9.04
	Black	21,593	19,048	16.05	16.91	36.71	33.52	5.75	5.30
	Hispanic	739	1,806	19.78	16.00	1.26	3.21	0.20	0.51
	AI/AN	426	1,400	13.26	21.63	0.72	2.49	0.11	0.39
	Asian/PI	410	763	14.30	12.74	0.70	1.36	0.11	0.21
	Unknown	49	1,292	14.54	22.60	0.08	2.30	0.01	0.36
7	White	36,181	34,080	15.66	15.89	61.18	60.47	9.63	9.59
	Black	21,409	17,242	15.92	15.47	36.20	30.60	5.70	4.85
	Hispanic	672	2,074	17.99	18.37	1.14	3.68	0.18	0.58
	AI/AN	421	950	13.11	14.68	0.71	1.69	0.11	0.27
	Asian/PI	392	907	13.67	15.15	0.66	1.61	0.10	0.26
	Unknown	64	1,102	18.99	19.28	0.11	1.96	0.02	0.31
8	White	35,125	31,944	15.20	14.90	61.85	59.12	9.35	8.99
	Black	20,122	17,553	14.96	15.75	35.43	32.49	5.36	4.94
	Hispanic	624	1,965	16.70	17.40	1.10	3.64	0.17	0.55
	AI/AN	461	879	14.35	13.58	0.81	1.63	0.12	0.25
	Asian/PI	394	829	13.74	13.84	0.69	1.53	0.10	0.23
	Unknown	61	861	18.10	15.06	0.11	1.59	0.02	0.24
9	White	36,653	34,215	15.86	15.95	60.83	61.29	9.76	9.63
	Black	21,999	16,655	16.36	14.94	36.51	29.83	5.86	4.69
	Hispanic	624	2,328	16.70	20.62	1.04	4.17	0.17	0.66
	AI/AN	482	1,073	15.01	16.58	0.80	1.92	0.13	0.30
	Asian/PI	430	840	15.00	14.03	0.71	1.50	0.11	0.24
	Unknown	63	717	18.69	12.54	0.10	1.28	0.02	0.20
10	White	31,818	29,705	13.77	13.85	61.34	61.05	8.47	8.36
	Black	18,605	15,414	13.83	13.83	35.87	31.68	4.95	4.34
	Hispanic	475	1,186	12.71	10.50	0.92	2.44	0.13	0.33
	AI/AN	473	801	14.73	12.37	0.91	1.65	0.13	0.23
	Asian/PI	448	876	15.63	14.63	0.86	1.80	0.12	0.25
	Unknown	50	671	14.84	11.74	0.10	1.38	0.01	0.19
11	White	28,934	27,140	12.52	12.66	62.42	62.02	7.70	7.64
	Black	16,166	13,360	12.02	11.99	34.88	30.53	4.30	3.76
	Hispanic	334	1,116	8.94	9.88	0.72	2.55	0.09	0.31
	AI/AN	485	688	15.10	10.63	1.05	1.57	0.13	0.19
	Asian/PI	397	861	13.85	14.38	0.86	1.97	0.11	0.24
	Unknown	35	592	10.39	10.36	0.08	1.35	0.01	0.17
12	White	26,749	25,257	11.58	11.78	62.94	62.32	7.12	7.11
	Black	14,606	12,383	10.86	11.11	34.37	30.55	3.89	3.48
	Hispanic	268	816	7.17	7.23	0.63	2.01	0.07	0.23
	AI/AN	464	682	14.45	10.54	1.09	1.68	0.12	0.19
	Asian/PI	396	912	13.81	15.23	0.93	2.25	0.11	0.26
	Unknown	15	481	4.45	8.41	0.04	1.19	0.00	0.14
Total	White	231,067	214,452						
	Black	134,500	111,655						
	Hispanic	3,736	11,291						
	AI/AN	3,212	6,473						
	Asian/PI	2,867	5,988						
	Unknown	337	5,716						
	Total	375,719	355,368						

Note: AI/AN = American Indian/American Native; PI = Pacific Islander

Results examining race by grade demonstrated that the weighted sample characteristics again approximated August 2001 enrollment statistics (see Table 3). Within a given race, the breakdown of percentage by grade generally varied from enrollment statistics by less than 5%. More than half of these comparisons (24) differed by less than 1%, a further 15 deviated by less than 5%, and the 3 remaining deviated by less than 10%. Within a given grade, the breakdown of percentages by race varied from enrollment statistics by less than 7%, with the vast majority (40) deviating by less than 5%. Overall, none of the weighted sample percentages for any one cell representing grade by race varied by more than 1.2% from August 2001 enrollment data.

There were relatively few differences observed in the comparison of the final weighted sample with enrollment statistics on key demographic variables. In the case of gender, the proportion of males to females was reversed, with females being weighted more in the final sample, but proportions still hovered around 0.50. As such, no adjustments to the sample weightings were made to counteract this observation.

Similarly, the final weighted sample race breakdown was also very close to that of the enrollment statistics. Minorities tended to be overrepresented, in particular the less prevalent minorities. Some of this effect was due to the forcing of mutually exclusive categories for race. Although the survey data did not force mutually exclusive categories, the August 2001 enrollment data did. Therefore, in order to compare these datasets, it was necessary to force participants into one category of race. In cases where participants reported multiple races, they were assigned to the least prevalent race of those endorsed. This particular method was employed due to the notion that participants' pride in their racial/ethnic self-characterization would be honored by favoring the least prevalent race/ethnicity when more than one was indicated. For example, if a participant checked off Caucasian and Asian/Pacific Islander, they were assigned to the Asian/Pacific Islander category. As a result, any discrepancy between this method and that used by the enrollment dataset could result in slight biases.

Any differences that were observed between the weighted final sample and the enrollment statistics were small and did not pose a threat to addressing survey goals. As such, no additional weightings were needed on the basis of demographics to further adjust the sample prior to analysis.

Unweighted numbers of participants by health planning region, race/ethnicity, and grade/gender can be found in Table 4.

Table 4. Demographic Characteristics of Survey Respondents

Demographic Characteristic		Unweighted Number
Total Alabama		92,822
Region		
1		30,239
2		23,062
3		19,616
4		19,905
Race/Ethnicity		
Caucasian		60,408
African American		27,141
Hispanic [1]		3,448
Asian		701
Native American		1,986
Pacific Islander		414
Missing Race/Ethnicity Data		2,900
Grade in School/Gender		
6th	Male	7,237
	Female	7,730
7th	Male	7,525
	Female	7,648
8th	Male	6,834
	Female	7,392
9th	Male	6,445
	Female	6,925
10th	Male	6,025
	Female	6,733
11th	Male	4,871
	Female	5,652
12th	Male	4,335
	Female	5,052
Missing Grade Data		1,904
Missing Gender Data		2,106

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Issues Concerning Sampling of Subpopulations

There are several issues related to the sampling of subpopulations. The first issue is representation. As shown in the previous section, the weighting scheme ensures that that each subpopulation is represented and contributes in proportion to its size. The second important issue pertains to response rates. A subpopulation may be undersampled because the response rate within the subpopulation is low. This can cause bias in the estimates. As discussed previously, the response rates in some counties were low, necessitating caution when interpreting the data. Precision is the third issue. Prevalence estimates were suppressed if they were insufficiently precise. The criteria for precision are based partially on the criteria developed by Greene and Rachal (2001) for Missouri's youth survey. An estimate was suppressed if it met any of the following conditions:

1) the sample size (the denominator) was less than 30
2) the prevalence estimate is less than 0.00005 or greater than 0.99995
3) the relative standard error (RSE) of the prevalence estimate was greater than 30%[5]

The fourth and final issue concerns the sampling method. It is possible that the sampling method will inadvertently sample only a certain segment of the subpopulation. When this occurs, the data collected are only representative of the segment of the population that is sampled. The authors know of only one instance when this occurred in the survey. Alternative school students in smaller classes were undersampled as a result of efforts to protect confidentiality. Although the size of the population was small, it may be that a large proportion of these students are at risk. Excluding this population may have caused some downward bias in the overall estimates, especially at the county level.

Outliers

All individual-level variables analyzed were dichotomized prior to aggregation. As such, the impact of outliers on samples is eliminated. Regardless of how high or low a score was, if it was above/below a cutoff point, it was assigned the same value as other scores on the same side of the cutoff point.

ANALYTIC PROCEDURES

Prevalence of ATOD

Tables were constructed containing both lifetime and past 30-day use prevalence rates, along with 95% confidence intervals for each substance. Prevalence rates for which the RSE met or exceeded 30% were suppressed as unreliable estimates. The RSE was calculated by dividing the standard error by the prevalence rate and multiplying by 100%. As such, it represents the percentage of the prevalence rate estimate. In

[5] The RSE was calculated by dividing the standard error of the estimate (SE(r)) by the estimate itself (r). That is, RSE=100 x (SE(r)/r).

addition, estimates below 0.005% or above 99.995% were also suppressed. The standard errors (SE) for those prevalence rates that passed these criteria were used to calculate 95% confidence intervals (95% CI = ±1.96*SE).

If confidence intervals overlap, a conclusion cannot be drawn with regards to statistical inference. This study will take the conservative route of assuming no significant difference between the prevalence rates if there was overlap between their 95% confidence intervals. Within tables, prevalence rates were: 1) cross tabulated for gender by grade, and 2) displayed for each race category. Findings of particular interest from these tables, as well as data comparing planning regions, were graphed for better and more immediate comprehension. The 95% confidence intervals were used to compare proportions. If confidence intervals did not overlap, then the proportions were concluded to be different.

Composition of Scale Scores

Scale scores were aggregated from item-level variables. Appendix D contains the subscale reliability for each scale score, along with the name, whether it is a risk or protective scale, and the number of items composing the scale. Reliability estimates (Cronbach's Alpha) for scales had to exceed a criterion of 0.6 in order for the scale to be used. One scale, Individual: Impulsivity, failed to exceed this criterion. Since the Individual: Religiosity scale comprised only one item, reliability was not calculated for it. Individual: Social Skills could not be computed because the items composing the scale were nominal scales of measurement.

Appendix D also lists each scale score and the items from which it is created, along with the number of non-missing items necessary to calculate the scale. Prior to calculating the scale scores, items within the scale were checked to ensure that they were coded in the correct direction. More specifically, items were reverse scored as necessary so that high scores would signify more risk (or more protection, for protective scale questions). Scale items were then summed, divided by the total number of points possible, and multiplied by 10. This resulted in scale scores ranging from 0 (least risk or protection possible) to 10 (most risk or protection possible).

Scale Prevalence Rates

This study generated prevalence rates in order to estimate the proportion of a population that was "at risk" for each scale. Responses for each risk and protective scale were dichotomized using a cutoff point. Individuals above this point were considered "at risk" (for risk factors) or "protected" (for protective factors), while those below/equal to this point were considered "not at risk" or "not protected".

Cutoff point determination

A variety of methods have been used to select cut points. One method was to select a point *a priori* such as the mid point of the scale in question (e.g., Greene & Rachal, 2001). The advantage of this method is its simplicity, requiring no calculation. However, one possible limitation is that, with the exception of previously normed scales, the use of

the mid point does not take into account the distributional properties of the scale scores obtained. In theory, two individuals may differ greatly with regards to their actual risk, but if their scale scores are both lower or both higher than the cut point, this difference would not be reflected. This would be accentuated if the median of the distribution of scale scores were above the cut point. In such a case, the majority of individuals sampled would necessarily be considered "at risk", irregardless of their risks relative to one another.

Another method involves dichotomizing based upon parameters of the distribution of scores (median + 0.15 * standard deviation; see Maine Office of Substance Abuse, Department of Behavioral and Developmental Services & Pan Atlantic Consultants, 2002). This method addresses the scores in relation to central tendency, while adding the additional cost of its calculation (but it is still relatively low-cost as it represents a univariate calculation). However, the cut point may actually exceed the range of the scale when the standard deviation is sufficiently large and the median sufficiently high. It is also unclear what the relationship is between the cut point and the outcome or outcomes for which the individual may be at risk.

A different method for cut point selection was chosen for this study. The method is based on signal detection theory. Signal detection theory has been examined extensively in medical decision making research (e.g., Hauben & Zhou, 2003; Allan & Siegel, 2002; Zweig, 1988; Zweig & Campbell, 1993; Zweig, 1995), but has not yet been published as a method for estimating prevalence based on risk scales. The advantage of this technique is that it allows the researcher to determine which scale scores in the data demonstrate a relationship to the outcomes of interest. This allows for the filtering of useless or irrelevant scale scores that may have little or no relationship to the outcomes. This would reduce or eliminate the influence of superfluous information leading to better targeting of resource allocation.

The concept is relatively straightforward. There is a dichotomous outcome or *gold standard* by which dichotomized scales are evaluated. Cutoff points are cycled through the entire range of the scale, creating a 2x2 contingency table for each cutoff point (see Table 5). Several useful diagnostic measures can be calculated from each table (each cutoff point). Those of most interest are sensitivity and specificity. Sensitivity is the probability that a score will be higher than the cut point (declared positive) given that the outcome is indeed positive. Specificity is the probability that a score will be lower or equal to the cut point (declared negative) given that the outcome is indeed negative.

Table 5. Contingency Table for Cutoff Points

	Outcome Positive	Outcome Negative
Scale Score Above Cutoff Point	True Positive	False Positive
Scale Score Below/Equal to Cutoff Point	False Negative	True Negative

$$\text{Sensitivity} = \frac{\text{True Positive}}{\text{True Positive + False Negative}}$$

$$\text{Specificity} = \frac{\text{True Negative}}{\text{True Negative + False Positive}}$$

$$\text{Accuracy} = \frac{\text{True Positive + True Negative}}{\text{Total Sample}}$$

Once these values have been determined for each possible cutoff point in a given scale-outcome combination, an overall measure of the relationship can be determined using the ROC (receiver operator characteristic) curve. The ROC curve is created by plotting the sensitivity by 1-specificity for each cutoff point. An example is shown in Figure 1. The diagonal line represents the theoretical case where there is no relationship between the scale and the outcome whatsoever. The further the curve deviates from this diagonal line, the stronger the relationship between the scale and the outcome. The area under the ROC curve is used to estimate the magnitude of this relationship (using the trapezoidal method). This value will vary between 1 (perfect relationship) and 0.5 (no relationship).

This measure of the overall relationship between the scale and outcome was used to determine for which scale-outcome combinations it would be valuable to create prevalence rates. Prevalence rates based on scales that provided insufficient information regarding outcomes would not be informative. As such, a criterion of 0.7 was used. Any scale-outcome for which the area under the ROC curve (AUROC) did not exceed 0.7 was not used.

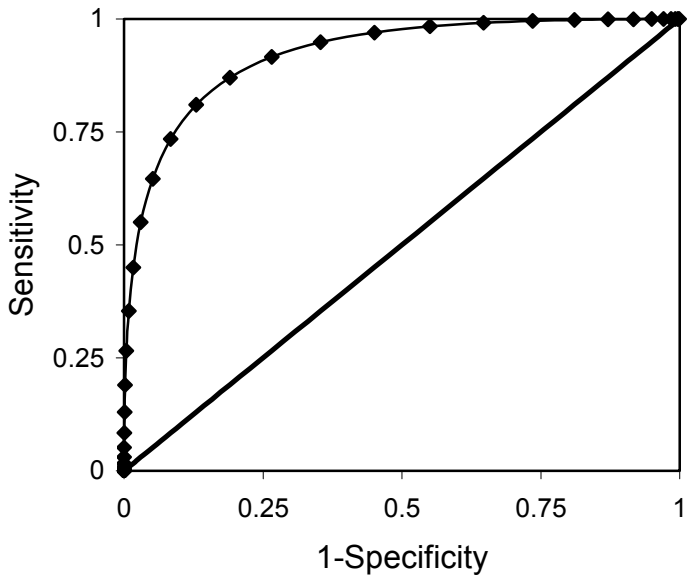

Figure 1. ROC Curve Example.

Once it was established that the AUROC for a scale-outcome pair exceeded 0.7, the optimized cutoff point was determined by finding at what cutoff point sensitivity and specificity had the same value, thus maximizing each. The sensitivity and specificity functions have the property of being independent of the prevalence of the outcome measure. Other measures such as the overall accuracy, which is dependent upon prevalence, would bias cut points to be spuriously high when prevalence is low, and low when prevalence is high. For example, consider the case where the prevalence rate was only 1%. Even if the cutoff point were set so high that not a single individual were declared at risk, the overall accuracy would be 99%. At such a cutoff point, the sensitivity would be 0 and the specificity would be 1. When attempting to detect those individuals who may be at risk for substance abuse, one would hope to have a better probability of detecting risk in those who are using substances. As such, the point of intersection between the sensitivity and specificity functions was used as the cutoff point. In this way, the probability of detecting use in those who are using substances and the probability of detecting lack of use in those who are not using substances were weighted equally. As the number of possible cutoff points on the scale was limited due to the properties of the scale, linear interpolation was used to estimate the optimal cutoff point when the point of intersection fell between two points at which the sensitivity and specificity functions were measured.

In summary, the following steps were taken to determine the cutoff points for scale scores in each grade:

1) The nature of being “at risk” was defined on a scale in relation to each of 5 outcome measures
    a. Lifetime Alcohol Use
    b. Lifetime Marijuana Use
    c. Lifetime Tobacco Use

d. Lifetime Inhalant Use
e. Lifetime Other Drug Use

2) An application of Signal Detection Theory determined each scale's overall relationship between each scale and each of the 5 substance use outcome measures as defined by the area under the ROC curve (AUROC).

3) For those scale/outcome pairs that the AUROC exceeded the criterion of 0.7, the cutoff point for which sensitivity and specificity were maximized was determined by using the cut point at which those functions intersect.

4) This empirically determined cutoff point was then used to create prevalence rates for each scale/outcome pair for each grade.

Risk and protective scale analysis

The tables on substance use reflected the sample demographics. Data are also useful to prevention providers when described in terms of the geography of need. Risk and county reported protective scale prevalence rates and maps were constructed delineating these rates. Colors were arranged such that any geographic patterns of high/low prevalence would be apparent.

Antisocial/Delinquent Behaviors

Tables similar to those summarizing the findings from research question 1 (prevalence of current and lifetime ATOD use) were constructed for delinquent and antisocial behaviors. Eight antisocial/delinquent behaviors were examined in each table. The first table was a cross tabulation of the prevalence rates, gender by grade. The second table reported the prevalence rates by race. The same rules regarding prevalence rate suppression were applied, and 95% confidence intervals were constructed using the same method previously described. Again, while acknowledging the resulting inflation of Type II error, prevalence rates were considered different only if their 95% confidence intervals did not overlap.

Prevalence of Need for Prevention Programming

The percentage of students in each county who would benefit from certain science-based programs was estimated. Prevention programs were selected from the Western Center for Application Technology's (CAPT) list of best practices. The list is published on the Internet (http://www.unr.edu/westcapt/bestpractices/bestprac.htm). Best practices are defined by the Western CAPT as the practices and programs identified as research-based by any one of the following agencies:

- The National Institute for Drug Abuse (NIDA)
- The Center for Substance Abuse Prevention (CSAP)
- The National Center for the Advancement of Prevention (NCAP)
- The Office of Juvenile Justice and Delinquency Prevention (OJJDP)
- The Centers for Disease Control and Prevention (CDC)

Each program on the list was reviewed to determine whether the program should be included in the analysis. Included programs met three criteria. The first criterion was that the program address the risk or protective factors with cut points in the survey data. The cut points were necessary match students with programs. The second criterion was that the survey data includes the program's target population. For example, some programs are intended only for children under the age of 12. Since there were almost no children under the age of 12 in the survey data, this study could not assess the need for these programs.

The third criterion was that the survey data could identify the target population. Some programs are appropriate only for students who are members of special populations. For example, Multi-Systemic Therapy is intended only for "chronically violent, substance abusing juvenile offenders" (Schinke, Brounstein, and Gardner, 2002). Assuming that all survey respondents were members of this target population would result in an overestimate of the need for this program. Rather than overestimate program need, programs were excluded when the target population was not readily identifiable.[6]

The final list of programs selected appears in Table 21, along with the Web addresses where the reader may obtain additional information on the relevant program. Each program was assessed according to risk and protective factor scales it addressed. This assessment was then translated into a set of binary variables in the database corresponding to each program. A set of logical arguments, based on which risk scales were addressed by the program, was used to assign values to the program variable for each individual student. Variables were given a value of 1 if an individual's risk and protective factor profile indicated that they would benefit from the program and a 0 if it indicated they would not benefit from the program.

Data were reported by county and mapped. Colors were arranged so geographic patterns of high/low prevalence would be apparent. Prevalence rates were calculated relative to each program's target population. For example, the "Across Ages" program only addresses 6^{th}-8^{th} graders. The prevalence rate was, therefore, reported as the rate within the 6^{th}-8^{th} grade population, and not the entire state youth population.

Validity Testing of Domain Scores

Modified Multitrait-Multimethod Matrix (MMTMM)

The risk and protective factor scales in the survey are typically grouped into four domains. The domains are: peer/individual, family, school, and community. A modified multitrait-multimethod matrix was used to investigate whether these domains were valid statistically.

[6] It is interesting to note that this criterion resulted in the exclusion of all programs designated "indicated" using the Institute of Medicine's (1997) classification scheme. It also resulted in the exclusion of two programs designated both selective and indicated (Project SUCCESS and Residential Student Assistance Program). These programs tended to target very high risk youth, often with serious or multiple problems. No other programs were excluded under this criterion.

A multitrait-multimethod matrix is a *n x n* matrix (*n* = total number of items times the total number of methods used to assess each item) of the inter-item correlations between a set of variables, with estimates of reliability replacing the diagonal. It is designed to assess whether different subsets of the items measure different underlying constructs (construct validity). Generally, several methods are used for assessing each item (pen and paper, oral, etc.). Construct validity is assessed by determining if the inter-item correlations follow a pattern determined by a set of assumptions designed around the concepts of convergent and discriminant validity (see Campbell & Fiske, 1959, for a full review). The estimates of reliability should be the highest of all the values (repeated measures of the same item converge with themselves while discriminating from other items). Once this is established, the next step is to check that items measuring the same factor using different methods correlate more highly than items measuring different factors (items measuring the same factor using different methods converge while they discriminate from items measuring different factors). Finally, correlations between items measuring factors from the same construct should correlate more highly than items measuring factors from a different construct (items within a construct converge while discriminating from items from different constructs).

A Modified Multitrait-Multimethod matrix (MMTMM) is used when different methods are not used. The result is the removal of the patterns and assumptions regarding the method factor, but not affecting the ability to assess convergent and discriminant validity (Trochim, 2000). In this case, different methods were not used to gather data and hence the MMTMM was appropriate. Table 6 below shows an example of an MMTMM. The table was further modified to reflect removal of the reliability estimates, as shown in Table 7. Temporal reliability estimates were not available because the survey was only administered once.

Table 6. A Contrived Example of a Modified MTMM Table

MMTMM

		Domain 1			Domain 2		
		A1	A2	A3	B1	B2	B3
Domain 1	A1	0.91	0.67	0.75	0.43	0.52	0.27
	A2	0.67	0.89	0.65	0.34	0.48	0.39
	A3	0.75	0.65	0.95	0.21	0.19	0.33
Domain 2	B1	0.43	0.34	0.21	0.92	0.71	0.75
	B2	0.52	0.48	0.19	0.71	0.9	0.81
	B3	0.27	0.39	0.33	0.75	0.81	0.88

Table 7. A Contrived Example of a Modified MTMM Table with Domain Sections Split to Indicate Relevant Sections of Domain and Reliability Estimates Removed

Domain Summaries

		Domain 1			Domain 2		
		A1	A2	A3	B1	B2	B3
Domain 1	A1		0.67	0.75	0.43	0.52	0.27
	A2	0.67		0.65	0.34	0.48	0.39
	A3	0.75	0.65		0.21	0.19	0.33
Domain 2	B1	0.43	0.34	0.21		0.71	0.75
	B2	0.52	0.48	0.19	0.71		0.81
	B3	0.27	0.39	0.33	0.75	0.81	

A matrix of the inter-item correlations between the student survey variables was constructed and appears in Appendix K. To establish construct validity, inter-item correlations between scales in the same domain should have higher correlations than inter-item correlations between scales from different domains. Domains were evaluated individually, and then the results were summarized. Each correlation of items within a domain was compared to all correlations of items outside that domain. This was done

on a variable by variable (row by row) basis. Each correlation between the current variable and a variable from the same domain (inter-domain) was compared to the correlations between the current variable and the variable from outside the domain (intra-domain). A tally was kept of the number of intra-domain correlations that exceeded the inter-domain correlation as well as the total number of comparisons made. In this way, each non-diagonal cell of the matrix for the inter-domain correlations had a value representing the number of violations of the assumptions as well as the number of opportunities for violations. The total number of violations in the domain divided by the total number of opportunities was used to quantify the degree to which convergent and discriminant validity was violated for each domain.

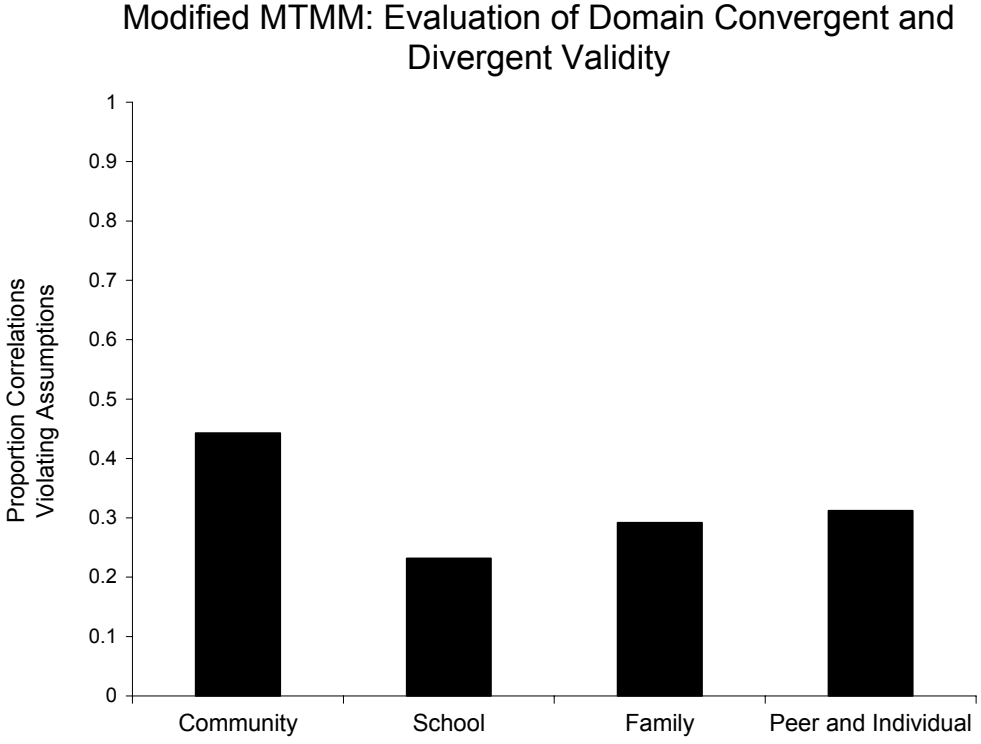

Figure 2. Degree of convergent and discriminant validity violated in MMTMM by domain.

Figure 2 shows the degree of convergent and discriminant validity violated in MMTMM, by domain. Each bar represents a domain. Optimally, each domain would have a score of zero, representing no violations of convergent and discriminant validity. More than 20% of the inter-domain and intra-domain correlation comparisons violated the assumptions. It is clear from the MMTMM that the domains as they were structured failed to be validated. As a result, the construction of domain summary measures following this structure was not appropriate and analyses were limited to scale score level analyses.

RESULTS

The findings delineated in this section may be used to inform planners and providers about substance use among and delinquent acts committed by Alabama's public school students. Additionally, analyses of the risk factors that may predispose youth to engage in these behaviors and the protective factors that may buffer the harmful influence of risk factors have revealed key issues that can be used in designing and implementing prevention efforts. Based upon the specific risk and protective factors that were demonstrated to be prevalent or deficient, respectively, among Alabama's youth, recommendations for prevention programs were made, incorporating CSAP's Model Programs. Planners and providers may derive particular insight from the maps depicting which counties contain a high percentage of respondents who manifest certain risk factors and consequently exhibit a need for specific prevention programs.

PREVALENCE OF SUBSTANCE USE

Lifetime and past month (30-day) substance use prevalence rates and confidence intervals are displayed in Tables 8 – 17; particularly salient patterns in the data are also depicted in Figures 3 - 5. Data are presented by grade and gender and by race/ethnicity. Additionally, Figures 6 - 13 depict lifetime and past month substance use data for each of Alabama's four health planning regions (see Appendix L for a map of Alabama's health planning regions). Confidence intervals (95% CI), which are calculated by adding/subtracting (1.96 * standard error of the prevalence rate) to/from the prevalence rate, are reported in the tables along with the prevalence rates. They are also shown as error bars in the figures depicting prevalence rates in Alabama's health planning regions.

As when interpreting any set of data, caution should be taken when drawing conclusions from these results. If the confidence intervals of groups that are being compared do not overlap, then the difference between the groups is significant. If the confidence intervals do overlap, however, one cannot be completely certain whether or not the groups being compared are in fact different—they may or may not be. Additionally, confidence intervals are affected by the sample size. For those groups that contained small numbers of respondents, confidence intervals may be very wide and their corresponding prevalence estimates may be inaccurate. Estimates with unacceptably wide confidence intervals were suppressed. Given the large number of respondents included in most analyses, results were suppressed infrequently.

Results from two other categorizations of the data are also presented here: 1) use of any drug (Table 16); and, 2) use of any drug except tobacco (i.e., cigarettes and chewing tobacco; Table 17). These are included only in the following descriptive analyses by grade/gender and by race/ethnicity. Although it is illegal for persons under 19 years of age to purchase tobacco products in the State of Alabama, tobacco is often categorized as a licit substance (e.g., Hadjicostandi & Cheurprakobkit, 2002; Tanda & Goldberg, 2000), as, like alcohol, it is legal for purchase by persons who are older than the statutory age. Additionally, tobacco use may be viewed apart from the use of other

substances, including alcohol, as its harmful consequences are less immediate than those related to other substances (e.g., Pentz, Sussman, & Newman, 1997; Hurt, Eberman, Slade, & Karan, 1993). Thus, these characterizations of data, both including and excluding tobacco use, were deemed as being valuable to the comprehensiveness of the report.

Results by Grade/Gender

Cigarettes

Gender disparities in both lifetime and past month cigarette consumption can be seen in Table 8. Males reported higher prevalence rates of cigarette use than females for both measures. Grade-based differences were also found for cigarette use. Overall, students in the upper grades maintained higher lifetime and past month prevalence rates than students in the lower grades.

Chewing tobacco

Gender differences in the use of chewing tobacco are evident in Table 9 and Figure 3. Collapsed across grade, past month prevalence rates for male students exceeded those of female students by an approximate factor of seven. Similarly, male students reported lifetime use rates for chewing tobacco that were more than four times those of female students. Generally, there was a developmental pattern of chewing tobacco use, such that students enrolled in the higher grades were more apt to report use than students in the lower grades. This pattern was particularly pronounced for lifetime prevalence rates for male students.

Alcohol

Male and female students reported similar prevalence rates for both lifetime and past month consumption of alcohol (Table 10 and Figure 4). While no gender disparities emerged in this data set, differences in reported use by school grade were evident. For both males and females, prevalence rates of lifetime and past month alcohol use increased as a function of school grade.

Marijuana

There were gender disparities in both lifetime and past month prevalence rates of marijuana use (Table 11 and Figure 5). When collapsed across grade, male students reported higher rates of marijuana use than females for both lifetime and 30-day measures. Similar to developmental patterns of cigarette, chewing tobacco, and alcohol use, a grade-based pattern in marijuana use was observed, such that students in the higher grades demonstrated more elevated prevalence rates than students in the lower grades.

Inhalants

As with alcohol use, male and female students reported similar prevalence rates of inhalant use, both for lifetime and past month use (Table 12), when collapsing across grade. As opposed to the developmental pattern that was evident for prevalence rates of cigarette, chewing tobacco, alcohol, and marijuana use, a unique grade-based function was revealed for inhalant use. Lifetime and past month prevalence rates increased between 6th and 7th grades for male students and, with the exception of the past month rate for 11th grade males, declined thereafter. Lifetime inhalant use prevalence rates for female students increased between 6th and 9th grades and subsequently decreased. Female students' past month inhalant use prevalence rates rose between 6th and 8th grades and then declined. The confidence intervals in some of these comparisons (e.g., comparisons between past month rates for males in 6th, 7th, and 8th grades) overlapped, however, so there may not be any real differences between the groups being compared.

Cocaine/crack

The data suggest that there were gender differences in rates of cocaine/crack use (Table 13). Male students tended to report higher prevalence use rates than female students for both lifetime and past month measures. The confidence intervals for male and female students overlapped slightly for lifetime prevalence rates, however. The developmental pattern that was observed for alcohol, cigarettes, chewing tobacco, and marijuana use generally held for cocaine/crack use as well. The cocaine/crack lifetime use prevalence rates were more consistent with this pattern than the past month rates, which occasionally decreased (e.g., decreased between 9th and 10th grade males), although confidence intervals usually were wide and tended to overlap.

LSD/psychedelics

There were gender differences for reported LSD/psychedelics use (Table 14). When collapsed across grade, male students displayed higher prevalence rates of use for both lifetime and past month measures. The confidence intervals for male and female students overlapped slightly for lifetime prevalence rates, however. Lifetime prevalence rates increased as a function of school grade, while there was no distinct pattern for past month rates. The estimate for past month LSD/psychedelics use among 6th grade females was suppressed.

Other drugs

While females were less likely than males to report past month use of "other drugs," this gender disparity was not evident for lifetime use (Table 15). Generally, the prototypical developmental pattern emerged for "other drug" use, such that older students reported higher rates of use than younger students.

Any drug

Gender differences were shown only for the past month use measure; when collapsed across grade, the prevalence rate of any drug use was higher for male students than for female students (Table 16). The same developmental pattern that was observed for cigarettes, chewing tobacco, alcohol, and marijuana, was demonstrated in this category as well. Students in the higher grades reported higher prevalence rates of any drug use than students in the lower grades, for both lifetime and past month measures.

Any drug except tobacco

The developmental pattern that was evident in some of the previous drug use examinations (e.g., chewing tobacco, cigarettes, alcohol, marijuana) also surfaced in this analysis. (Table 17). Students in the higher grades were more likely to report use than students in the lower grades. When collapsing across grade, there were no gender differences for either the lifetime or past month measures of non-tobacco drug use.

Table 8. Prevalence of Use and Estimated Numbers of Cigarette Users in the Lifetime and Past 30 Days Among Alabama Public School Students, by Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		45.42	147,227	44.52	46.32	18.02	58,336	17.39	18.65
Grade/Gender									
6th	Male	26.15	5,762	23.92	28.38	7.55	1,661	6.39	8.71
	Female	21.67	5,741	19.71	23.63	5.37	1,419	4.51	6.23
7th	Male	35.89	8,017	33.5	38.28	13.02	2,910	11.45	14.59
	Female	32.33	8,754	29.68	34.98	10.38	2,809	8.99	11.77
8th	Male	46.13	9,999	43.86	48.4	18.58	4,000	16.84	20.32
	Female	41.74	11,443	39.07	44.41	15.03	4,134	13.56	16.5
9th	Male	53.15	12,716	49.99	56.31	22.53	5,388	19.37	25.69
	Female	48.80	13,683	46.08	51.52	20.14	5,634	18.47	21.81
10th	Male	56.07	11,735	52.89	59.25	23.71	4,964	21.36	26.06
	Female	53.78	13,316	50.68	56.88	20.10	4,970	17.87	22.33
11th	Male	59.10	11,124	56.61	61.59	27.42	5,161	24.95	29.89
	Female	57.87	12,778	55.26	60.48	24.41	5,388	22.08	26.74
12th	Male	59.70	10,549	55.98	63.42	28.22	4,969	25.53	30.91
	Female	55.63	11,611	52.73	58.53	23.72	4,936	21.23	26.21
All Males		47.42	69,901	46.3	48.54	19.74	29,053	18.86	20.62
All Females		43.75	77,326	42.65	44.85	16.59	29,284	15.88	17.3
Race/Ethnicity									
Caucasian		48.17	102,931	47.03	49.31	21.44	45,820	20.66	22.22
African American		39.94	40,163	39.59	41.29	10.98	11,003	10	11.96
Hispanic [1]		47.22	5,288	44.12	50.32	22.46	2,502	19.77	25.15
Asian		39.28	1,529	32.75	45.81	18.41	707	13.24	23.58
Native American		54.32	3,309	50.73	57.91	22.23	1,347	19.47	24.99
Pacific Islander		52.65	839	43.24	62.06	24.45	389	16.61	32.29

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 9. Prevalence of Use and Estimated Numbers of Chewing Tobacco Users in the Lifetime and Past 30 Days Among Alabama Public School Students, by Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		19.20	62,463	18.53	19.87	8.27	26,811	7.88	8.66
Grade/Gender									
6th	Male	17.57	3,900	15.94	19.2	7.23	1,597	6.27	8.19
	Female	5.34	1,426	4.22	6.46	1.92	509	1.39	2.45
7th	Male	25.28	5,666	23.14	27.42	11.50	2,572	10.05	12.95
	Female	6.51	1,767	5.53	7.49	2.47	668	1.76	3.18
8th	Male	32.18	6,973	30.06	34.3	16.00	3,461	14.43	17.57
	Female	7.71	2,134	6.79	8.63	2.75	757	2.18	3.32
9th	Male	36.61	8,821	33.63	39.59	18.27	4,395	16.27	20.27
	Female	7.52	2,111	6.34	8.7	2.46	691	1.83	3.09
10th	Male	40.91	8,598	37.5	44.32	18.86	3,944	16.53	21.19
	Female	8.63	2,135	7.4	9.86	2.57	636	1.73	3.41
11th	Male	41.31	7,798	38	44.62	19.16	3,608	17.18	21.14
	Female	9.40	2,078	7.89	10.91	1.73	383	1.12	2.34
12th	Male	42.08	7,431	38.06	46.1	18.22	3,210	15.69	20.75
	Female	7.77	1,625	6.5	9.04	1.83	381	1.14	2.52
All Males		33.25	49,187	32.13	34.37	15.45	22,787	14.74	16.16
All Females		7.49	13,276	7.06	7.92	2.28	4,024	2.03	2.53
Race/Ethnicity									
Caucasian		24.56	52,694	23.7	25.42	10.60	22,675	10.07	11.13
African American		7.48	7,542	6.85	8.11	3.26	3,272	2.83	3.69
Hispanic [1]		22.29	2,517	19.7	24.88	11.22	1,249	9.24	13.2
Asian		15.73	615	10.73	20.73	7.53	290	4.37	10.69
Native American		27.06	1,649	24.04	30.08	13.08	161	10.81	15.35
Pacific Islander		25.75	409	17.4	34.1	10.13	161	5.76	14.5

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

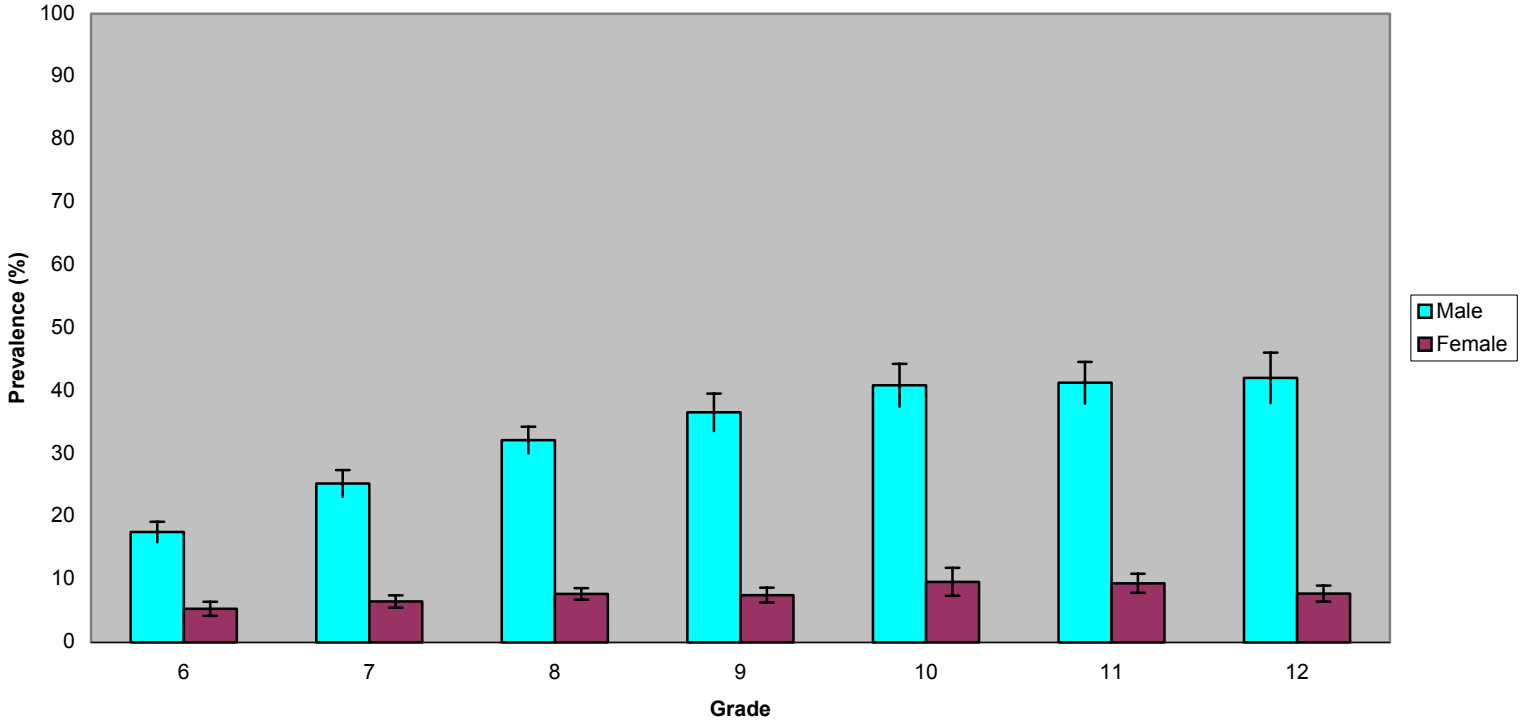

Figure 3. Prevalence rates of lifetime chewing tobacco use, by grade and gender. Error bars denote 95% confidence intervals.

Table 10. Prevalence of Use and Estimated Numbers of Alcohol Users in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		55.47	178,274	54.51	56.43	28.94	92,328	28.16	29.72
Grade/Gender									
6th	Male	28.85	6,247	27.05	30.65	10.42	2,225	9.05	11.79
	Female	23.14	6,074	21.32	24.96	8.52	2,216	7.30	9.74
7th	Male	40.78	8,953	38.55	43.01	16.90	3,672	14.98	18.82
	Female	35.33	9,526	32.72	37.94	14.41	3,851	12.88	15.94
8th	Male	53.15	11,284	50.19	56.11	25.64	5,392	23.48	27.80
	Female	51.46	14,079	48.87	54.05	24.39	6,644	22.41	26.37
9th	Male	62.13	14,821	59.54	64.72	34.22	8,103	31.16	37.28
	Female	61.84	17,290	58.78	64.90	33.61	9,344	31.06	36.16
10th	Male	67.08	13,869	64.10	70.06	38.57	7,900	35.49	41.65
	Female	69.69	17,109	67.75	71.63	35.80	8,768	33.08	38.52
11th	Male	74.11	13,877	71.62	76.60	44.91	8,300	42.09	47.73
	Female	72.31	15,850	70.31	74.31	39.07	8,533	36.70	41.44
12th	Male	77.35	13,581	74.53	80.17	49.33	8,577	45.66	53.00
	Female	75.66	15,715	73.29	78.03	42.39	8,802	39.67	45.11
All Males		56.73	82,632	55.57	57.89	30.64	44,169	29.56	31.72
All Females		54.41	95,642	53.27	55.55	27.54	48,158	26.60	28.48
Race/Ethnicity									
Caucasian		56.55	120,646	55.39	57.71	31.00	65,642	30.02	31.98
African American		53.87	52,970	52.16	55.58	24.89	24,264	23.58	26.20
Hispanic [1]		54.93	6,013	51.48	58.38	32.78	3,544	29.64	35.92
Asian		48.27	1,792	41.61	54.93	24.38	900	17.48	31.28
Native American		58.12	3,481	54.59	61.65	30.05	1,779	26.93	33.17
Pacific Islander		60.76	939	51.14	70.38	43.68	694	33.92	53.44

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

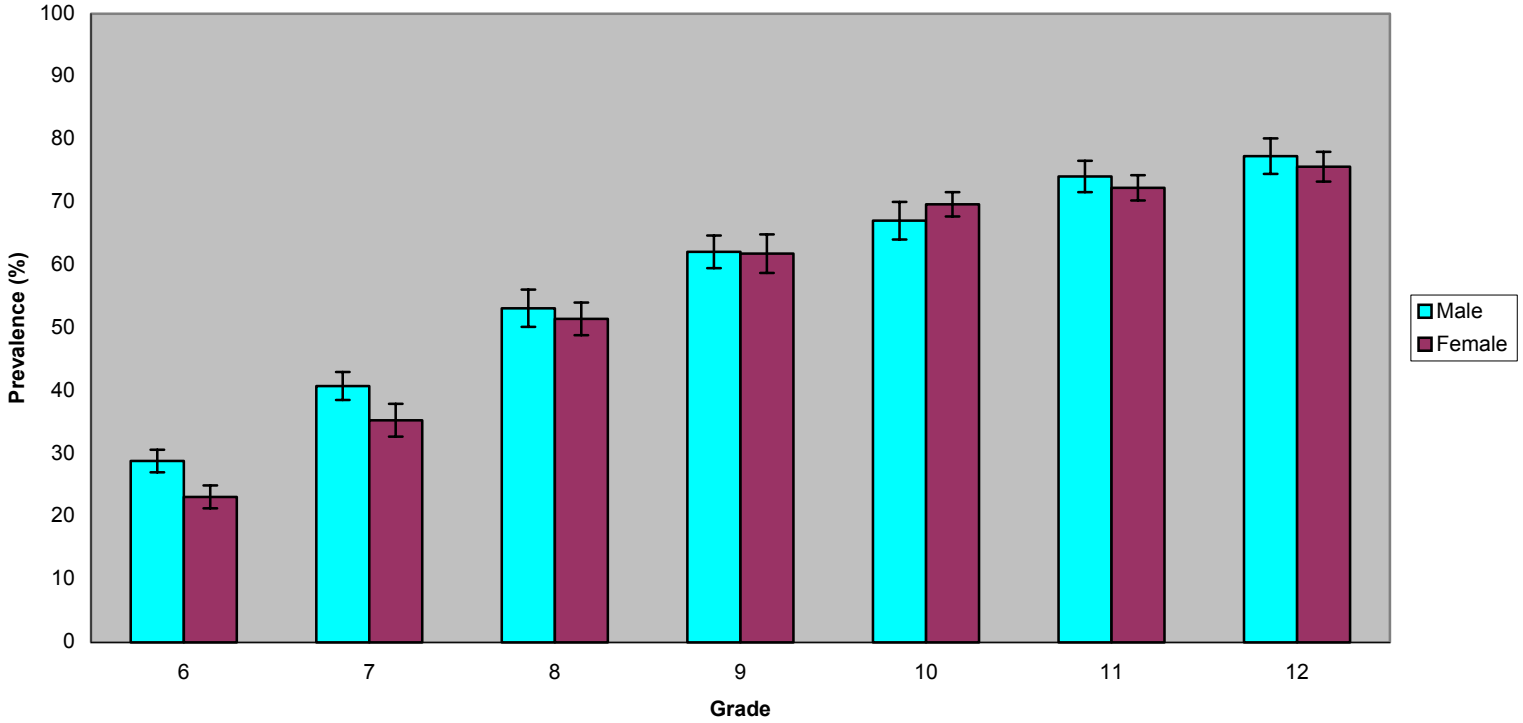

Figure 4. Prevalence rates of lifetime alcohol use, by grade and gender. Error bars denote 95% confidence intervals.

Table 11. Prevalence of Use and Estimated Numbers of Marijuana Users in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		23.89	75,836	23.15	24.63	11.31	35,672	10.86	11.76
Grade/Gender									
6th	Male	6.72	1,417	5.70	7.74	3.64	759	2.86	4.42
	Female	3.26	846	2.30	4.22	1.28	328	0.81	1.75
7th	Male	13.11	2,818	11.54	14.68	7.20	1,544	5.91	8.49
	Female	8.54	2,272	7.11	9.97	4.48	1,184	3.54	5.42
8th	Male	22.87	4,781	21.11	24.63	11.84	2,444	10.35	13.33
	Female	15.53	4,192	13.88	17.18	7.50	2,019	6.32	8.68
9th	Male	29.43	6,916	27.12	31.74	14.76	3,422	12.86	16.66
	Female	23.84	6,600	21.15	26.53	11.90	3,292	10.18	13.62
10th	Male	37.00	7,544	34.43	39.57	17.92	3,623	15.96	19.88
	Female	28.84	7,032	26.10	31.58	12.62	3,065	10.82	14.42
11th	Male	44.08	8,182	41.45	46.71	21.76	4,009	19.90	23.62
	Female	34.34	7,489	32.11	36.57	13.88	3,018	12.37	15.39
12th	Male	46.12	8,047	42.34	49.90	20.82	3,593	18.27	23.37
	Female	37.21	7,701	34.45	39.97	16.34	3,374	14.38	18.30
All Males		27.70	39,705	26.72	28.68	13.66	19,393	12.99	14.33
All Females		20.75	36,131	19.85	21.65	9.39	16,279	8.82	9.96
Race/Ethnicity									
Caucasian		24.64	52,130	23.74	25.54	11.43	24,027	10.92	11.94
African American		22.75	21,889	21.48	24.02	11.39	10,880	10.45	12.33
Hispanic [1]		24.59	2,624	21.96	27.22	12.80	1,345	10.94	14.66
Asian		19.52	713	14.87	24.17	9.86	359	6.19	13.53
Native American		26.75	1,570	23.30	30.20	14.45	842	11.67	17.23
Pacific Islander		31.57	494	23.00	40.14	13.85	211	7.81	19.89

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

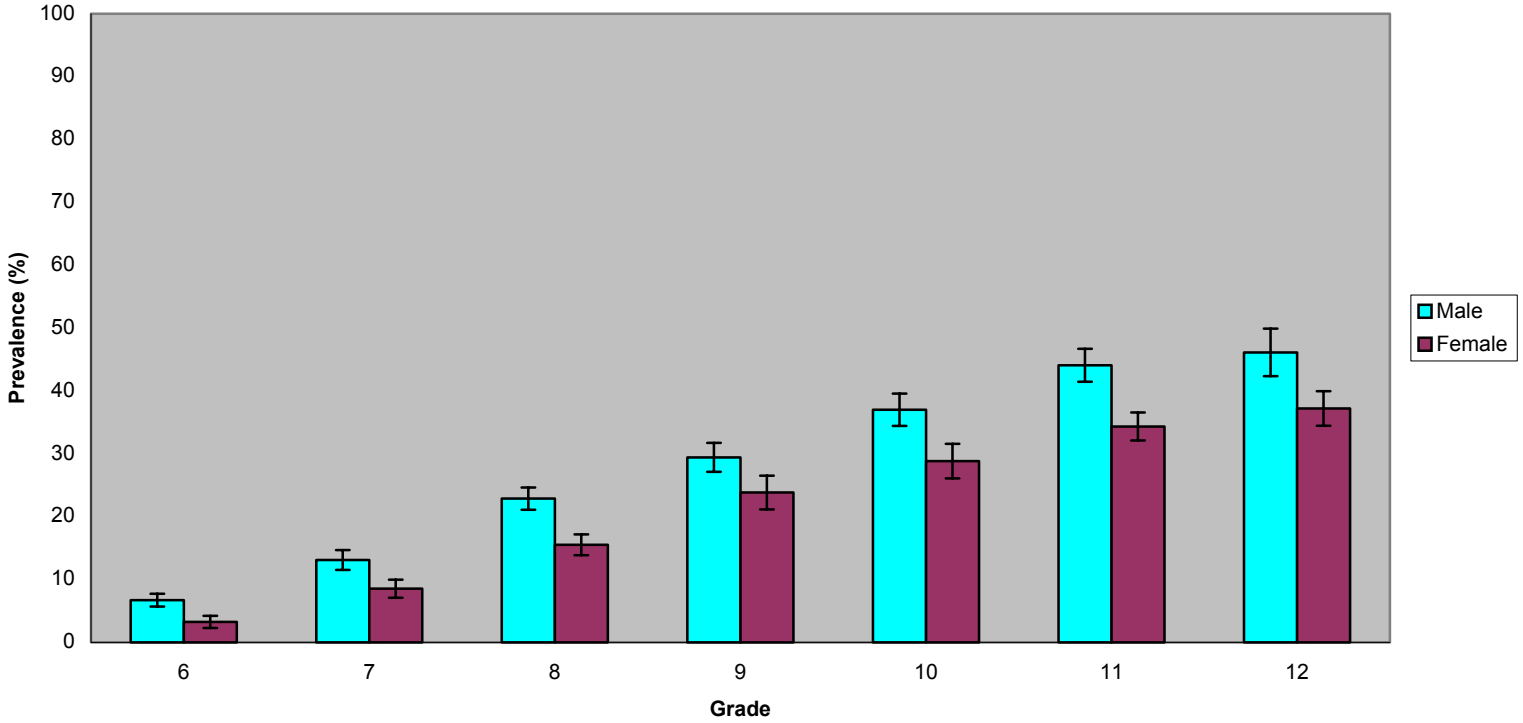

Figure 5. Prevalence rates of lifetime marijuana use, by grade and gender. Error bars denote 95% confidence intervals.

Table 12. Prevalence of Use and Estimated Users of Inhalants in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		13.27	41,844	12.78	13.76	4.41	13,905	4.14	4.68
Grade/Gender									
6th	Male	13.28	2,747	11.71	14.85	5.87	1,211	4.85	6.89
	Female	10.44	2,666	9.24	11.64	4.71	1,202	3.87	5.55
7th	Male	16.55	3,502	14.45	18.65	6.87	1,452	5.73	8.01
	Female	13.48	3,529	12.01	14.95	6.21	1,623	5.23	7.19
8th	Male	16.00	3,300	14.49	17.51	5.74	1,186	4.92	6.56
	Female	16.08	4,321	14.34	17.82	6.40	1,722	5.34	7.46
9th	Male	14.23	3,322	12.29	16.17	4.73	1,106	3.71	5.75
	Female	16.35	4,533	14.41	18.29	5.26	1,457	3.85	6.67
10th	Male	12.71	2,582	10.97	14.45	2.33	471	1.82	2.84
	Female	12.87	3,138	11.16	14.58	3.15	768	2.44	3.86
11th	Male	12.58	2,330	10.5	14.66	3.22	596	2.3	4.14
	Female	9.84	2,147	8.7	10.98	1.89	413	1.34	2.44
12th	Male	12.03	2,093	10.31	13.75	2.62	455	1.82	3.42
	Female	7.88	1,632	6.68	9.08	1.17	242	0.74	1.6
All Males		13.99	19,876	13.3	14.68	4.56	6,477	4.21	4.91
All Females		12.68	21,967	12.09	13.27	4.29	7,428	3.94	4.64
Race/Ethnicity									
Caucasian		15.51	32,641	14.86	16.16	4.85	10,188	4.5	5.2
African American		8.55	8,148	7.84	9.26	3.42	3,255	3.01	3.83
Hispanic [1]		17.91	1,903	15.38	20.44	7.58	804	5.84	9.32
Asian		11.90	433	8.02	15.78	5.20	186	2.38	8.02
Native American		19.11	1,123	16.21	22.01	5.99	347	4.62	7.36
Pacific Islander		19.44	295	10.99	27.89	*	*	*	*

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 13. Prevalence of Use and Estimated Numbers of Users of Cocaine/Crack in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		3.72	11,777	3.47	3.97	1.50	4,715	1.36	1.64
Grade/Gender									
6th	Male	1.66	344	1.17	2.15	1.09	225	0.68	1.50
	Female	1.40	360	0.71	2.09	0.88	225	0.43	1.33
7th	Male	2.98	637	2.29	3.67	1.76	374	1.19	2.33
	Female	2.46	648	1.75	3.17	1.40	369	0.73	2.07
8th	Male	3.46	716	2.79	4.13	2.13	440	1.39	2.87
	Female	2.71	728	2.04	3.38	0.95	254	0.68	1.22
9th	Male	4.03	948	3.07	4.99	1.94	449	1.27	2.61
	Female	3.94	1,092	3.08	4.80	1.54	425	0.99	2.09
10th	Male	3.82	777	2.94	4.70	1.39	283	1.02	1.76
	Female	4.20	1,028	2.93	5.47	1.10	267	0.79	1.41
11th	Male	6.12	1,133	4.77	7.47	2.25	417	1.39	3.11
	Female	4.85	1,062	3.89	5.81	1.34	293	0.91	1.77
12th	Male	7.05	1,231	5.78	8.32	2.10	364	1.59	2.61
	Female	5.18	1,072	4.24	6.12	1.59	328	1.14	2.04
All Males		4.06	5,787	3.71	4.41	1.80	2,553	1.56	2.04
All Females		3.45	5,990	3.12	3.78	1.25	2,162	1.07	1.43
Race/Ethnicity									
Caucasian		4.73	9,961	4.38	5.08	1.62	3,400	1.46	1.78
African American		1.48	1,418	1.15	1.81	1.08	1,025	0.81	1.35
Hispanic [1]		7.20	771	5.51	8.89	3.71	395	2.61	4.81
Asian		4.71	172	2.06	7.36	*	*	*	*
Native American		5.62	327	4.03	7.21	2.65	154	1.71	3.59
Pacific Islander		*	*	*	*	*	*	*	*

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 14. Prevalence of Use and Estimated Numbers of Users of LSD/Psychedelics in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		4.53	14,321	4.22	4.84	1.73	5,454	1.57	1.89
Grade/Gender									
6th	Male	1.66	344	1.13	2.19	0.92	191	0.49	1.35
	Female	1.00	257	0.53	1.47	*	*	*	*
7th	Male	2.57	547	1.84	3.30	1.62	345	1.09	2.15
	Female	1.94	511	1.27	2.61	1.34	351	0.65	2.03
8th	Male	3.83	794	3.10	4.56	2.12	438	1.58	2.65
	Female	2.86	773	2.23	3.49	1.10	296	0.81	1.39
9th	Male	4.98	1,168	3.69	6.27	2.36	548	1.52	3.20
	Female	4.88	1,351	3.78	5.98	2.30	637	1.63	2.97
10th	Male	5.26	1,067	4.26	6.26	1.93	393	1.44	2.42
	Female	5.38	1,314	3.85	6.91	1.91	468	1.30	2.52
11th	Male	8.63	1,604	7.04	10.22	2.70	500	1.76	3.64
	Female	5.83	1,275	4.83	6.83	1.58	345	1.11	2.05
12th	Male	10.76	1,870	8.80	12.72	2.27	393	1.66	2.88
	Female	7.00	1,445	5.84	8.16	1.95	402	1.34	2.56
All Males		5.19	7,395	4.72	5.66	1.98	2,809	1.73	2.23
All Females		3.99	6,926	3.62	4.36	1.53	2,646	1.31	1.75
Race/Ethnicity									
Caucasian		5.77	12,170	5.34	6.20	1.95	4,097	1.73	2.17
African American		1.66	1,586	1.31	2.01	1.22	1,164	0.91	1.53
Hispanic [1]		7.17	762	5.41	8.93	3.58	377	2.38	4.78
Asian		7.04	255	3.83	10.25	*	*	*	*
Native American		7.24	422	5.04	9.44	3.00	175	1.94	4.06
Pacific Islander		*	*	*	*	*	*	*	*

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 15. Prevalence of Use and Estimated Numbers of Users of Other Drugs in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		12.28	38,454	11.81	12.75	5.99	18,728	5.66	6.32
Grade/Gender									
6th	Male	7.58	1,555	6.33	8.83	3.44	702	2.62	4.26
	Female	5.09	1,290	4.09	6.09	2.13	538	1.37	2.89
7th	Male	9.86	2,055	8.55	11.17	5.15	1,076	4.07	6.23
	Female	8.02	2,084	6.8	9.24	4.08	1,055	3.16	5
8th	Male	11.52	2,362	10.29	12.75	6.32	1,287	5.4	7.24
	Female	11.45	3,053	10.22	12.68	6.12	1,633	5.2	7.04
9th	Male	14.22	3,307	12.22	16.22	7.70	1,776	6.13	9.27
	Female	14.68	4,042	12.94	16.42	7.10	1,953	5.77	8.43
10th	Male	14.73	2,973	13.04	16.42	7.21	1,456	5.94	8.48
	Female	14.88	3,608	12.84	16.92	6.83	1,664	5.65	8.01
11th	Male	16.70	3,074	14.62	18.78	8.30	1,524	6.87	9.73
	Female	14.51	3,147	12.92	16.1	5.74	1,248	4.78	6.7
12th	Male	16.55	2,869	14.67	18.43	8.51	1,464	7.14	9.88
	Female	14.76	3,035	12.84	16.68	6.56	1,351	5.33	7.79
All Males		12.90	18,194	12.27	13.53	6.61	9,285	6.14	7.08
All Females		11.77	20,260	11.16	12.38	5.49	9,442	5.08	5.9
Race/Ethnicity									
Caucasian		14.63	30,557	14.04	15.22	7.13	14,872	6.7	7.56
African American		6.77	6,406	6.14	7.4	3.23	3,052	2.84	3.62
Hispanic [1]		14.54	1,507	12.38	16.7	8.09	842	6.33	9.85
Asian		16.12	575	10.85	21.39	*	*	*	*
Native American		19.95	1,152	16.49	23.46	12.17	701	8.9	15.44
Pacific Islander		29.03	451	19.45	38.61	*	*	*	*

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 16. Prevalence of Use and Estimated Users of Any Drugs in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		60.12	213,785	59.24	61.00	34.59	123,003	33.81	35.37
Grade/Gender									
6th	Male	37.12	9,965	35.20	39.04	16.25	4,364	14.96	17.54
	Female	31.60	9,292	29.58	33.62	12.28	3,612	11.10	13.46
7th	Male	48.18	12,723	45.65	50.71	24.55	6,483	22.51	26.59
	Female	43.72	12,939	41.25	46.19	20.17	5,969	18.25	22.09
8th	Male	59.90	14,679	57.57	62.23	33.69	8,256	31.44	35.94
	Female	57.53	16,778	55.14	59.92	31.26	9,116	29.34	33.18
9th	Male	67.61	18,038	64.71	70.51	42.35	11,298	39.12	45.58
	Female	66.18	19,371	63.32	69.04	39.32	11,510	36.99	41.65
10th	Male	71.27	16,484	68.84	73.70	46.12	10,666	43.43	48.81
	Female	74.49	18,984	72.69	76.29	40.71	10,375	37.44	43.98
11th	Male	74.67	15,498	71.98	77.36	50.22	10,423	47.26	53.18
	Female	73.88	17,233	70.29	77.47	44.13	10,293	40.82	47.44
12th	Male	77.34	14,994	74.40	80.28	52.70	10,218	49.13	56.27
	Female	77.62	16,806	75.35	79.89	48.14	10,423	45.47	50.81
All Males		61.05	102,382	59.99	62.11	36.79	61,707	35.75	37.83
All Females		59.29	111,403	58.17	60.41	32.62	61,296	31.64	33.60
Race/Ethnicity									
Caucasian		63.25	143,184	62.21	64.29	38.51	87,174	37.53	39.49
African American		54.86	64,586	53.27	56.45	27.35	32,202	26.13	28.57
Hispanic [1]		56.37	7,628	51.29	61.45	34.38	4,653	30.60	38.16
Asian		50.73	2,262	44.18	57.28	27.78	1,239	21.84	33.72
Native American		64.87	4,458	61.68	68.06	37.69	2,591	34.36	41.02
Pacific Islander		62.57	1,237	54.46	70.68	42.63	843	34.24	51.02

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Table 17. Prevalence of Use and Estimated Numbers of Users of Any Drug Except Tobacco in the Lifetime and Past 30 Days Among Alabama Public School Students, by Selected Demographic Characteristics: 2002 Data

		Lifetime				Past 30 days			
		Percentage	Number	95% CI		Percentage	Number	95% CI	
Total Alabama		53.51	190,287	52.61	54.41	29.92	106,392	29.18	30.66
Grade/Gender									
6th	Male	28.65	7,690	27.10	30.20	12.28	3,296	11.08	13.48
	Female	25.13	7,391	23.31	26.95	10.50	3,087	9.40	11.60
7th	Male	38.47	10,158	36.20	40.74	19.13	5,053	17.27	20.99
	Female	36.72	10,868	34.31	39.13	17.26	5,108	15.65	18.87
8th	Male	50.73	12,432	48.16	53.30	26.86	6,582	24.66	29.06
	Female	51.22	14,939	48.89	53.55	27.50	8,019	25.76	29.24
9th	Male	59.46	15,863	56.42	62.50	35.03	9,347	32.07	37.99
	Female	61.83	18,097	58.87	64.79	35.64	10,431	33.25	38.03
10th	Male	63.23	14,625	60.17	66.29	39.03	9,026	36.09	41.97
	Female	69.84	17,798	67.96	71.72	37.01	9,432	33.97	40.05
11th	Male	68.93	14,306	66.07	71.79	44.43	9,221	41.65	47.21
	Female	69.41	16,189	65.88	72.94	39.44	9,199	36.46	42.42
12th	Male	71.92	13,943	68.57	75.27	47.24	9,159	43.95	50.53
	Female	73.84	15,988	71.51	76.17	43.56	9,432	40.91	46.21
All Males		53.08	89,017	51.96	54.20	30.82	51,684	29.84	31.80
All Females		53.90	101,270	52.78	55.02	29.12	54,708	28.20	30.04
Race/Ethnicity									
Caucasian		56.38	127,639	55.34	57.42	32.82	74,304	31.90	33.74
African American		48.90	57,566	47.25	50.55	24.68	29,052	23.48	25.88
Hispanic [1]		49.25	6,663	44.51	53.99	29.77	4,028	26.30	33.24
Asian		43.95	1,960	37.91	49.99	23.47	1,047	17.75	29.19
Native American		55.33	3,803	52.00	58.66	31.58	2,171	28.37	34.79
Pacific Islander		54.97	1,087	46.62	63.32	37.53	742	29.20	45.86

Note: The 95% CI = 95% confidence interval of the prevalence (i.e., percentage) of use. Estimated numbers of users are rounded to the nearest whole number.

Data in this table represent weighted estimates; unweighted numbers of respondents are shown in Table 4.

* Estimate suppressed due to large standard error

[1] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian

Results by Race/Ethnicity

Cigarettes

Asian and African American students reported similarly low prevalence rates of lifetime cigarette use (Table 8); however, the confidence interval for Asian students was much wider than that for African American students, presumably due to the small number of Asian students in the sample. African American students exhibited the lowest prevalence rate of past month cigarette use, clearly setting them apart from other racial/ethnic groups. Caucasian and Hispanic students reported intermediate and similar rates for lifetime and past month cigarette use. Reports of cigarette use were highest among students of Native American and Pacific Islander descent.

Chewing tobacco

African American students displayed the lowest prevalence rates for both lifetime and past month use of chewing tobacco (Table 9). Caucasian, Hispanic, Native American, and Pacific Islander students exhibited similar prevalence rates for both lifetime and past month use. Students of Asian descent reported comparatively intermediate rates of chewing tobacco use.

Alcohol

Students of Asian descent reported the lowest prevalence rate of lifetime alcohol use (Table 10); however the confidence interval for this prevalence estimate overlapped with confidence intervals for prevalence estimates for African American, Hispanic, Native American, and Pacific Islander students. Similarly, although students of Asian descent exhibited the lowest past month prevalence rate of alcohol consumption, the confidence interval for this estimate overlapped with confidence intervals for prevalence estimates for Caucasian, African American, Hispanic, and Native American students. Thus, any ostensible differences between groups may not be statistically significant.

Marijuana

Asian students reported the lowest prevalence rates for both lifetime and past month use of marijuana (Table 11), although the confidence intervals for these estimates overlapped with those for estimates for other racial/ethnic groups. Generally, prevalence rates for Caucasian, African American, and Hispanic students were similar.

Inhalants

African American students exhibited the lowest prevalence rates of inhalant use for both lifetime and past month measures (Table 12), although the confidence intervals for these estimates overlapped with those for estimates for other groups in some cases. Asian and Caucasian students reported intermediate estimates of inhalant use. Lifetime inhalant use prevalence estimates were similar for Hispanic, Native American, and

Pacific Islander students. The estimate for past month inhalant use among Pacific Islander students was suppressed due to its wide variance estimate.

Cocaine/crack

Lifetime and past month use of cocaine prevalence rates were lowest among African American students (Table 13). Caucasian and Asian students reported similar prevalence rates for lifetime cocaine use. Due to wide variance in the prevalence estimates, past month prevalence rates were suppressed for Asian and Pacific Islander students and the lifetime prevalence rate was suppressed for Pacific Islander students.

LSD/psychedelics

African Americans reported the lowest prevalence rates of LSD/psychedelics use for both lifetime and past month measures (Table 14). Caucasian students reported intermediate estimates of lifetime and past month LSD/psychedelics use. Lifetime prevalence rates were similar for Hispanic, Asian, and Native American students. Prevalence estimates were suppressed for Pacific Islander students for both lifetime and past month measures. The past month prevalence rate only was suppressed for Asian students.

Other drugs

African American students exhibited the lowest prevalence rates of "other drug" use for both lifetime and past month measures (Table 15). Caucasian and Hispanic students shared similarly intermediate prevalence rates for lifetime and past month data. Past month prevalence rates were suppressed for both Asian and Pacific Islander students.

Any drug

Students of Asian descent exhibited the lowest lifetime prevalence rate of any drug use (although the confidence interval overlaps with those for several other groups) and were comparable with students of African American descent on the past month measure (Table 16). Groups that reported the highest prevalence rates of any drug use included Caucasians, Native Americans, and Pacific Islanders.

Any drug except tobacco

Students of Asian descent reported the lowest prevalence rates for the use of any drug excluding tobacco for both lifetime and past month measures (Table 17). The highest prevalence rates were found among Caucasian, Native American, and Pacific Islander students.

Results by Health Planning Region

The results indicated that there are some regional differences in both past month and lifetime use of chewing tobacco (Figure 6). Regions 2 and 3 manifested similarly lower prevalence rates than did Regions 1 and 4 for both past month and lifetime use. Similarly, Regions 2 and 3 displayed lower rates of past month and lifetime cigarette use (Figure 7), although the confidence intervals for these regions overlapped with those of the other regions, particularly for lifetime use. Regions 1, 2, and 3 demonstrated similar prevalence rates for past 30-day use of alcohol (Figure 8), which were less than that of Region 4. Lifetime prevalence rates of alcohol consumption were highest for Regions 3 and 4, which were similar to each other, and lowest for Regions 1 and 2, which were similar to each other. There was little variation between regions for past month and lifetime prevalence rates of marijuana use (Figure 9), although Region 4 displayed the highest rates for both categories. Reported past month inhalant use was lowest for Region 2, whereas both Regions 2 and 3 displayed relatively lower rates of lifetime inhalant use (Figure 10). Region 3 exhibited the lowest prevalence rates for past month and lifetime use of cocaine/crack and LSD/psychedelics (Figures 11 and 12). Finally, Region 3 demonstrated significantly lower prevalence rates than the other regions for both past 30-day and lifetime use of “other drugs” (Figure 13).

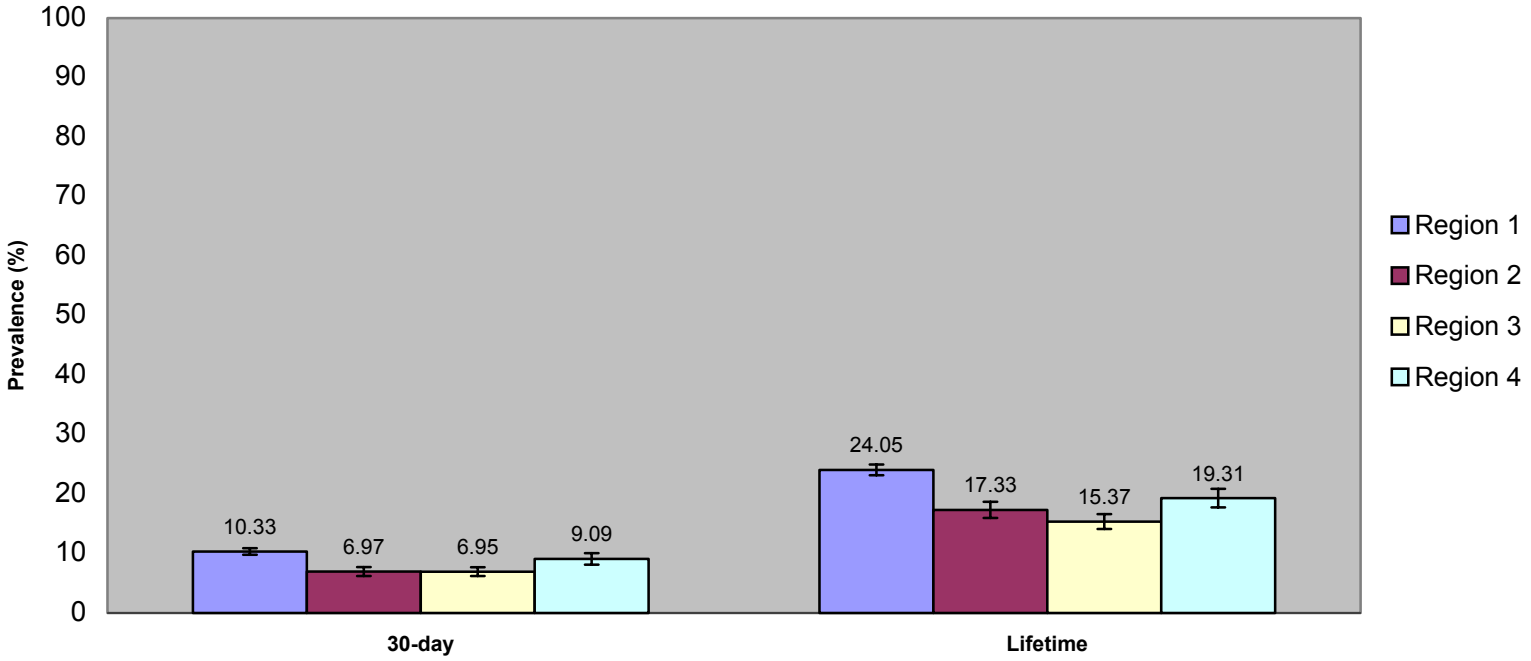

Figure 6. Lifetime and past month prevalence of chewing tobacco use, by health planning region. Error bars denote 95% confidence intervals.

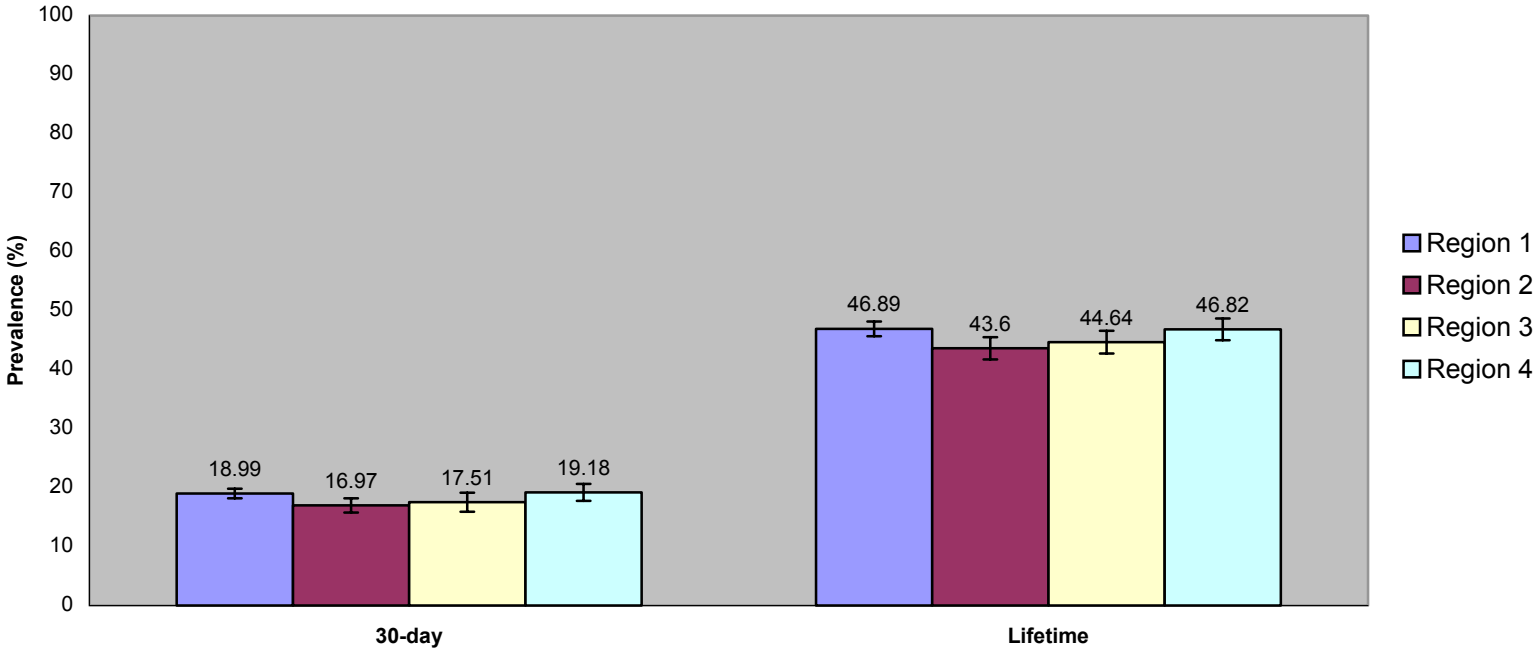

Figure 7. Lifetime and past month prevalence of cigarette use, by health planning region. Error bars denote 95% confidence intervals.

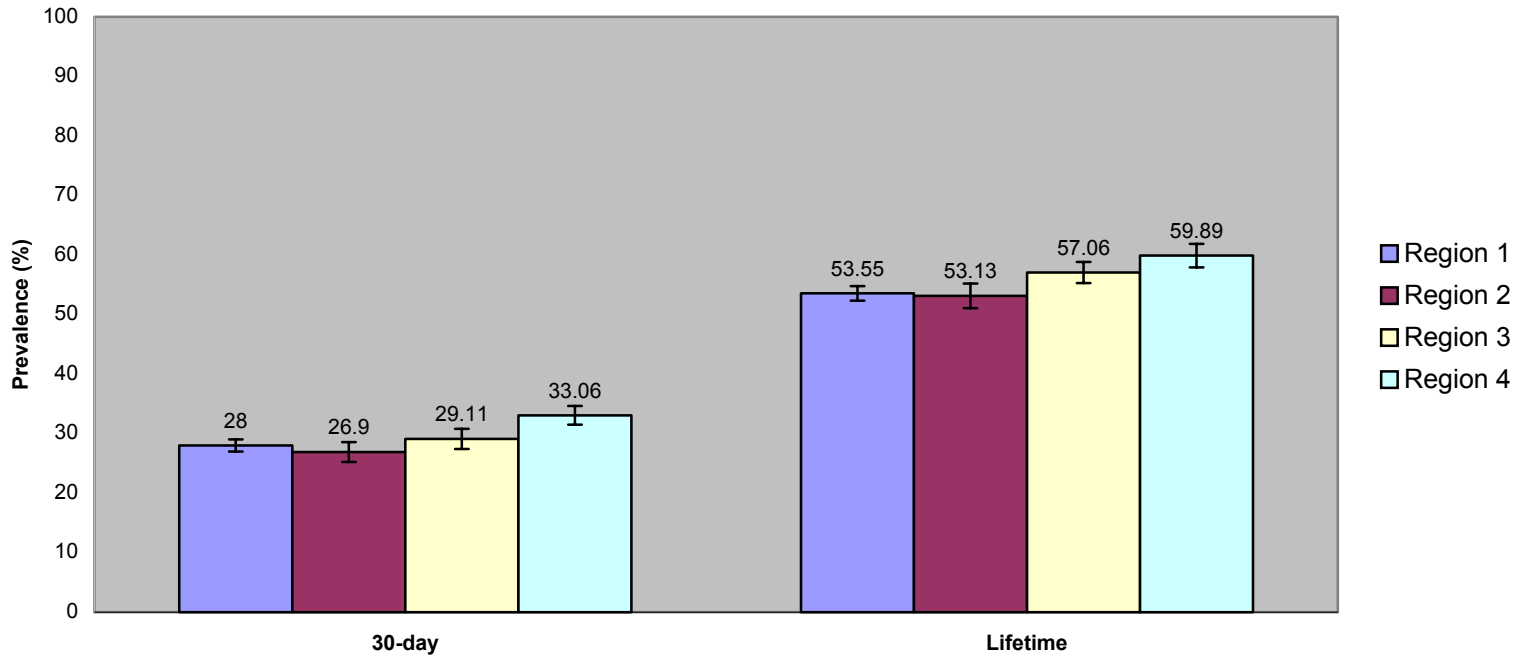

Figure 8. Lifetime and past month prevalence of alcohol use, by health planning region. Error bars denote 95% confidence intervals.

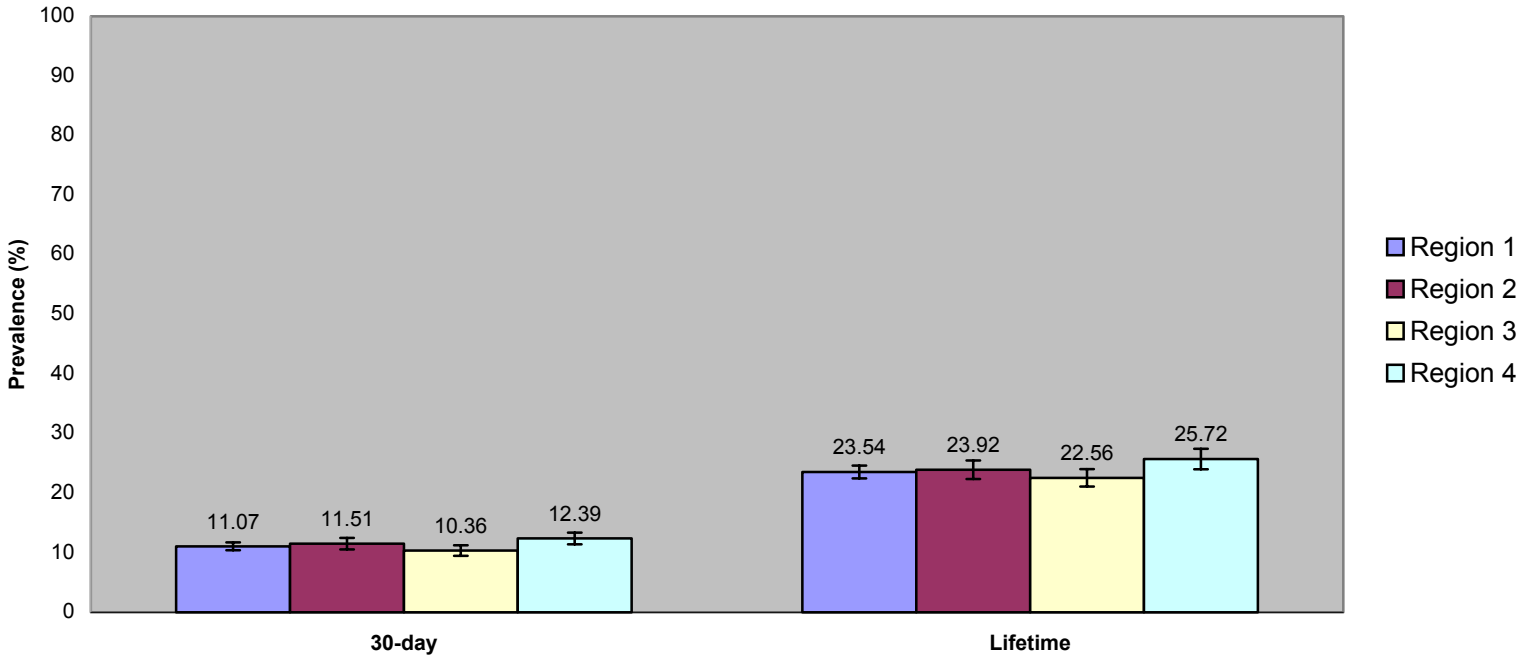

Figure 9. Lifetime and past month prevalence of marijuana use, by health planning region. Error bars denote 95% confidence intervals.

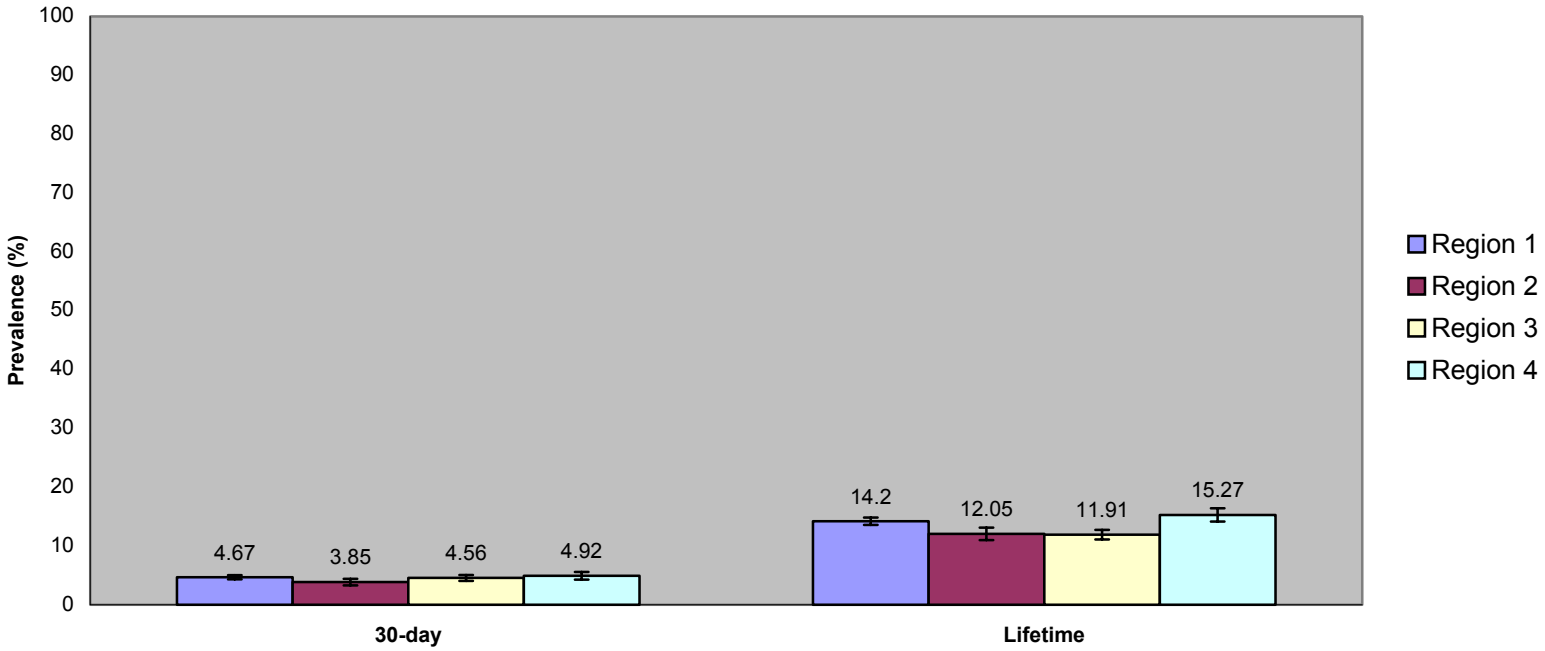

Figure 10. Lifetime and past month prevalence of inhalant use, by health planning region. Error bars denote 95% confidence intervals.

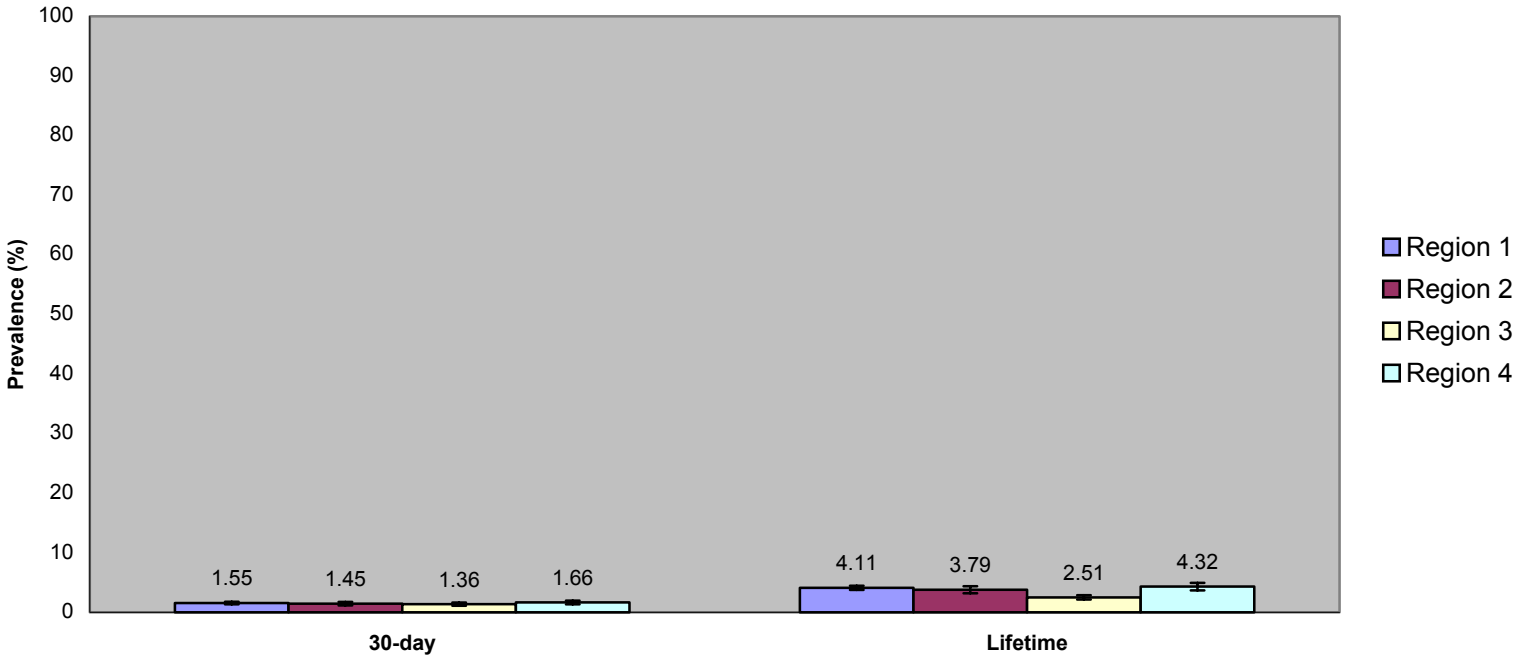

Figure 11. Lifetime and past month prevalence of cocaine/crack use, by health planning region. Error bars denote 95% confidence intervals.

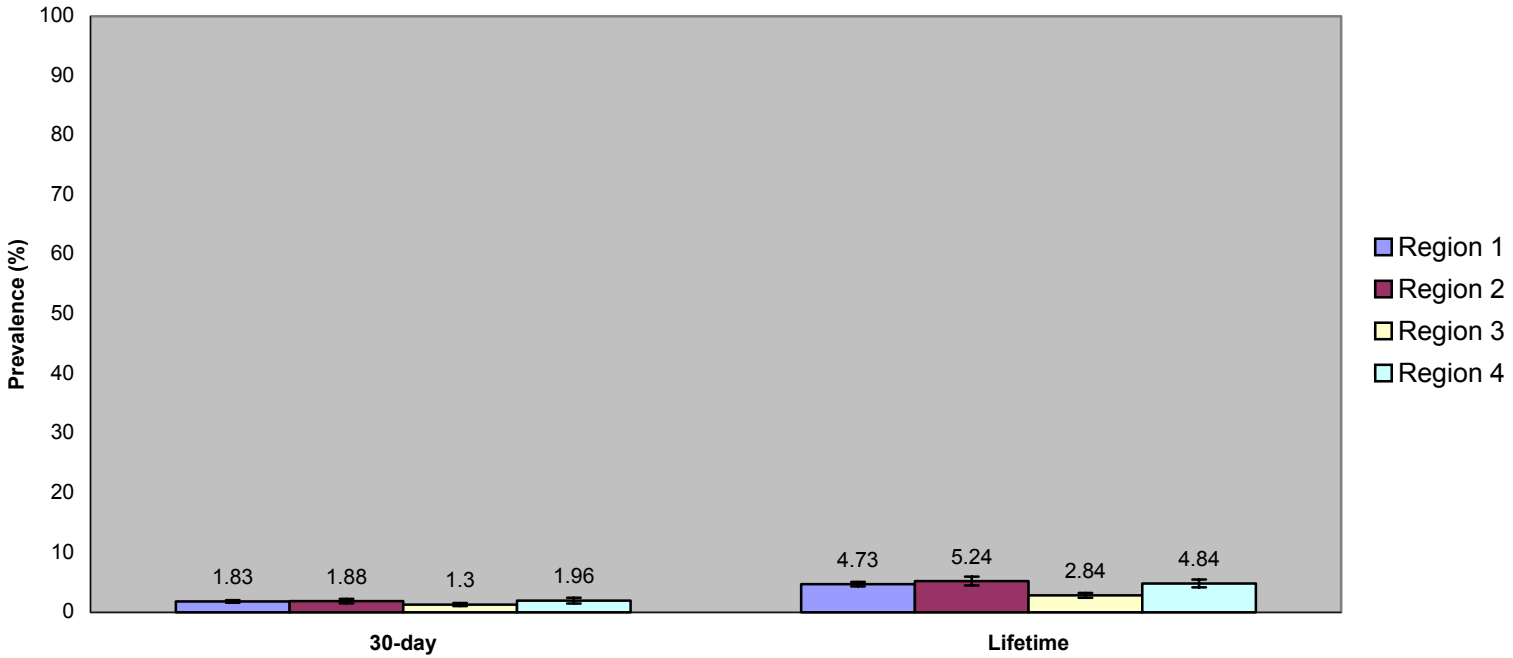

Figure 12. Lifetime and past month prevalence of LSD/psychedelics use, by health planning region. Error bars denote 95% confidence intervals.

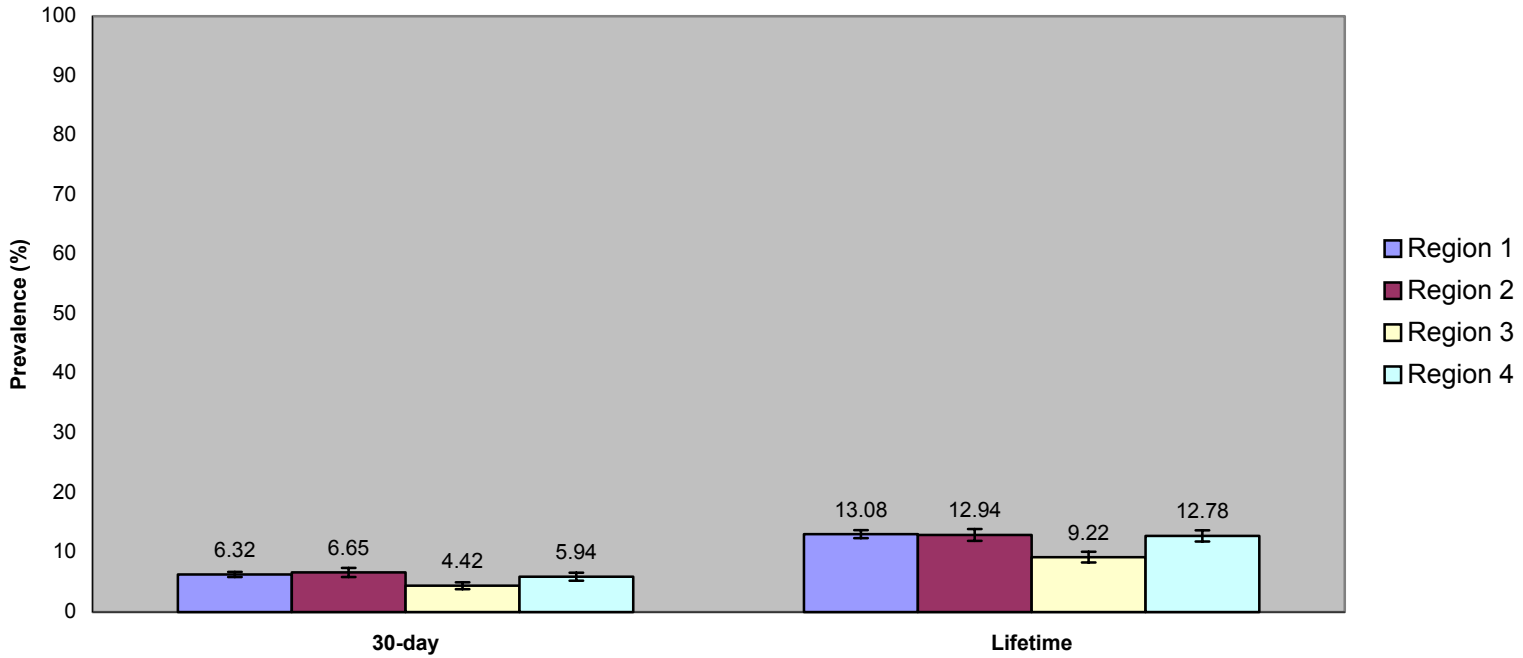

Figure 13. Lifetime and past month prevalence of other drug use, by health planning region. Error bars denote 95% confidence intervals.

COMPARISON OF ALABAMA'S DATA WITH DATA FROM OTHER STATES AND NATIONAL DATA

Data from Florida (2001 Florida Youth Substance Abuse Survey; Channing L. Bete Company, Inc. & Florida Department of Children and Families Substance Abuse Program, 2002), Virginia (Virginia Community Youth Survey: 2000; CSR, Incorporated, 2001), and Monitoring the Future (MTF; 2002 data; Johnston, O'Malley, & Bachman, 2002), a national data set, are compared with Alabama's survey data in Table 20. Florida was chosen as a comparison state because it borders Alabama, thus providing a somewhat similar geographical situation, and because the data are collected from its administration of the CTC survey. Virginia was deemed a suitable comparison state since its racial/ethnic composition is similar to that of Alabama (United States Bureau of the Census, 2000) and because it also reported youth data compiled from its administration of the CTC survey. Data from the MTF survey were selected over other data obtained from national surveys (e.g., National Household Survey on Drug Abuse) because the MTF survey was the most similar to the Alabama survey in terms of ATOD use items, administration process, and aggregation by grade. MTF's and Virginia's data were available for 8^{th}, 10^{th}, and 12^{th} grades, while Florida's data were accessible for comparison for 6^{th}, 8^{th}, 10^{th}, and 12^{th} grades.

Alabama distinguished itself from the other states and MTF for smokeless tobacco use, particularly in the lower grades. For both lifetime and 30-day prevalence rates, Alabama's students reported heavier use of smokeless tobacco than their counterparts in the other studies, with the exception of Virginia's 12^{th} graders. Alabama's students' patterns of cigarette use were higher than MTF and other states' patterns for 6^{th} and 8^{th} grades (both lifetime and 30-day), but fell in line with reported use from Virginia, Florida, and the MTF survey for the 10^{th} and 12^{th} grades. Lifetime marijuana use among Alabama's adolescents tended to be less than that reported by adolescents on the other studies, particularly for 12^{th} grade and 10^{th} grade. For the most part, however, data from Alabama were not sizably or consistently different from those from Virginia, or Florida for alcohol, marijuana, inhalants, cocaine, or LSD use. With the notable exceptions of cigarette (in the lower grades) and chewing tobacco use prevalence rates, Alabama's prevalence rates were generally lower than those from the MTF survey, reflecting that the rates of substance use among Alabama's adolescent population are less than the national average.

Table 18. Comparison of Alabama Data with Florida, Virginia, and MTF Data

	Smokeless Tobacco	Cigarettes	Alcohol	Marijuana	Inhalants	Cocaine	LSD
Lifetime Use							
6th Grade							
Alabama	10.9	23.7	25.7	4.8	11.7	1.5	1.3
Florida	7.8	20.1	28.5	5.6	11.9	1.8	1.0
8th Grade							
Alabama	18.5	43.7	52.2	18.7	16.1	3.0	3.3
Florida	10.5	39.5	56.3	22.2	13.3	3.0	3.2
Virginia	11.3	33.3	43.4	11.2	15.7	2.9	2.7
MTF	12.8	40.5	51.7	20.3	17.9	4.5	4.6
10th Grade							
Alabama	23.5	54.8	68.5	32.6	12.8	4.0	5.3
Florida	14.1	46.7	69.8	35.5	10.9	5.0	6.4
Virginia	17.1	53.7	66.8	31.0	13.0	4.4	6.5
MTF	19.1	55.1	71.4	40.3	16.6	6.9	8.9
12th Grade							
Alabama	23.5	57.5	76.4	41.3	9.8	6.0	8.7
Florida	15.1	51.1	76.1	42.0	10.8	5.8	6.9
Virginia	25.0	68.0	76.6	50.7	12.6	6.3	13.6
MTF	23.1	62.5	80.3	48.8	14.2	8.6	13.0
30-day Use							
6th Grade							
Alabama	4.3	6.4	9.4	2.3	5.2	1.0	0.7
Florida	3.1	5.1	11.9	2.2	5.2	0.2	0.1
8th Grade							
Alabama	8.6	16.6	24.9	9.4	6.1	1.5	1.6
Florida	4.9	13.1	30.1	11.3	4.6	1.0	0.8
Virginia	4.6	12.1	17.7	5.9	7.4	1.1	1.6
MTF	4.2	14.6	22.4	9.1	4.5	1.2	1.2
10th Grade							
Alabama	10.0	21.8	37.1	15.0	2.8	1.2	1.9
Florida	5.2	17.6	42.3	18.0	2.9	1.7	2.3
Virginia	7.4	22.5	36.8	18.0	4.8	1.4	2.6
MTF	6.1	23.9	41.0	19.7	2.6	1.8	2.3
12th Grade							
Alabama	9.3	25.8	45.6	18.4	1.8	1.8	2.1
Florida	4.6	20.5	49.7	19.7	2.1	2.4	2.2
Virginia	10.9	35.3	51.9	27.2	1.7	3.8	6.4
MTF	7.6	31.4	50.0	21.6	2.2	2.1	2.6

Note: Reported here are prevalence rates (%).

"LSD" includes other psychedelics; AL, VA "cocaine" category includes crack; FL, MTF "cocaine" includes cocaine only

FL data are from the 2001 Florida Youth Substance Abuse Survey; VA data are from the Virginia Community Youth Survey 2000: Virginia Prevention Needs Assessment:Alcohol and Other Drugs; MTF data are from the 2002 survey

PREVALENCE OF ANTISOCIAL/DELINQUENT BEHAVIORS

Along with surveying students regarding their substance use patterns, another goal of this study was to assess the levels of antisocial/delinquent behaviors exhibited by Alabama's adolescent population. Research suggests that there is a positive correlation between substance abuse and delinquent behavior in children and adolescents (e.g., Lowenstein, 2001; Sanford, 2001; Komro, Williams, Forster, Perry, Farbakhsh, & Stigler, 1999). Additionally, there are some theories positing that there is a single underlying factor (e.g., Donovan & Jessor, 1985; Donovan, Jessor, & Costa, 1991) or multiple common underlying factors (e.g., Williams, Ayers, Abbott, Hawkins, & Catalano, 1996; Osgood, Johnston, O'Malley, & Bachman, 1988) partially accounting for substance use and antisocial/delinquent behaviors among adolescents.

Prevalence rates of antisocial/delinquent behaviors are displayed by grade and gender (Table 18), by race/ethnicity (Table 19), and by health planning region (Figures 14 -17). Eight delinquent behaviors or consequences of delinquent behaviors are characterized in these tables and figures: school suspension, carrying a handgun, selling drugs, stealing (or attempting to steal) a motor vehicle, being arrested, attacking someone with the intention to harm, getting drunk or high at school, and taking a handgun to school. Items on the questionnaire asked students to report whether they had committed these acts in the past 12 months; frequencies of these behaviors were compiled and data were dichotomized ("no," if student had never committed the act; "yes," if student had committed the act at least once). Confidence intervals (95% CI), which are calculated by adding/subtracting (1.96 * standard error of the prevalence rate) to/from the prevalence rate, are reported in the tables along with the prevalence rates. Caution should be taken when drawing conclusions from these results. If the confidence intervals of groups that are being compared do not overlap, then the difference between the groups is significant. If the confidence intervals do overlap, however, one cannot be certain whether or not the groups being compared are in fact different—they may or may not be. Confidence intervals are affected by the sample size; for those groups that contained small numbers of respondents, confidence intervals may be very wide and their corresponding prevalence estimates may not be precise. Estimates with confidence intervals that were too wide were suppressed.

Results by Gender

A gender-based comparison of the prevalence of antisocial/delinquent behaviors reveals a consistent pattern whereby males' self-reports of having engaged in these acts were higher than those of females. This finding is in line with the literature indicating that male adolescents tend to commit more delinquent/antisocial acts than female adolescents (e.g., Huebner & Betts, 2002; Barriga, Morrison, Liau, & Gibbs, 2001). There was a developmental pattern for some delinquent behaviors. In particular, prevalence rates of adolescents reporting that they had been drunk or high while at school, arrested, or had sold drugs, increased across successive grades. Prevalence rates for other delinquent behaviors, namely, getting suspended from school, attacking someone with the intention to do harm, carrying a handgun, bringing a handgun to school, and stealing or attempting to steal a motor vehicle, generally

appeared to escalate from the sixth grade, peak during the middle school grades and ninth grade, and then decline for high school sophomores, juniors, and seniors.

Results by Race/Ethnicity

Self-reported prevalence rates of delinquent behaviors occurring in the past twelve months were also examined by the self-reported racial/ethnic characteristics of the students. Pacific Islander/Hawaiian and African American students reported prevalence rates for "school suspension" that were similar to each other and higher than those reported by other racial/ethnic groups, although the confidence interval for the Pacific Islander/Hawaiian students was wider than that for the African American students. Caucasian and African American students reported prevalence rates for "having sold drugs" that were less than rates reported by other racial/ethnic groups. Caucasian, African American, and Asian students reported lower rates of "being drunk or high at school" than other racial/ethnic groups, although the confidence intervals for Asian students were wider than those for the Caucasian and African American students. Prevalence rates for "attacking someone with the intention to do harm" were highest among Pacific Islander/Hawaiian, Native American/Alaskan, and African American students, although the confidence intervals for Pacific Islander/Hawaiian and Native American/Alaskan students were considerably wider than those for African American students. In a similar vein, prevalence rates for "carried a handgun" were highest among Pacific Islander/Hawaiian, Native American/Alaskan, and Hispanic students, although the confidence intervals for Pacific Islander/Hawaiian and Native American/Alaskan students were considerably wider than those for Hispanic students. For "being arrested," "stealing a car," or "taking a handgun to school," there was little variation among races/ethnicities, with the exception of Caucasian students, who reported a rate that was less than those of the other groups.

Results by Health Planning Region

The examination of problem behaviors by planning region revealed few differences between regions. Perhaps the most heterogeneity is displayed for reports of school suspensions (Figure 14). Region 3's rate for students reporting suspensions within the past twelve months exceeded those of the other regions. Region 3 also exhibited the highest prevalence rate of students attacking someone with the intention of harming them within the past twelve months (Figure 14), although the confidence intervals for this estimate overlapped with those for Regions 2 and 4. Prevalence rates of selling drugs within the past year were highest among students from Region 2 (Figure 15), although the confidence interval for this estimate overlapped with those for Regions 1 and 4. Only Regions 1 and 4 were significantly different on the measure of students reporting that they had been drunk or high at school within the past year (Figure 15). Prevalence rates for stealing/attempting to steal a motor vehicle (Figure 16) did not indicate any significant differences between regions. Region 1 had the lowest prevalence rate of students reporting that they had brought a handgun to school (0.94), although the confidence interval for this estimate overlapped slightly with that of Region 4 (Figure 16). Region 1 again demonstrated the lowest prevalence rates of students reporting that they had carried a handgun or that they had been arrested (Figure 17), although the confidence intervals overlapped with estimates for other regions.

Table 19. Prevalence of Delinquent Behaviors in the Past 12 Months Among Alabama Public Students by Gender and Grade: 2002

		Grade						
		6th	7th	8th	9th	10th	11th	12th
Suspended	*Male*	16.4 (14.5 - 18.4)	19.1 (17.1 - 21.2)	20.4 (18.2 - 22.6)	20.3 (17.9 - 22.7)	19.8 (15.9 - 20.3)	18.0 (15.8 - 20.3)	15.3 (10.9 - 19.7)
	Female	9.2 (7.9 - 10.5)	12.5 (10.0 - 14.9)	13.8 (11.2 - 16.3)	13.3 (11.3 - 15.4)	11.8 (9.9 - 13.8)	9.5 (8.0 - 11.1)	7.5 (6.1 - 9.0)
Carried gun	*Male*	8.6 (7.1 - 10.0)	8.6 (7.1 - 10.1)	9.2 (8.0 - 10.4)	9.4 (8.0 - 10.9)	9.8 (8.2 - 11.5)	10.7 (9.2 - 12.2)	9.4 (7.9 - 10.9)
	Female	0.9 (0.6 - 1.3)	1.2 (0.6 - 1.8)	1.2 (0.9 - 1.6)	2.4 (1.7 - 3.1)	1.7 (1.0 - 2.4)	1.1 (0.7 - 1.5)	1.8 (1.1 - 2.5)
Sold drugs	*Male*	2.2 (1.5 - 2.9)	4.4 (3.4 - 5.3)	7.6 (6.3 - 8.8)	9.3 (7.2 - 10.9)	11.1 (9.5 - 12.8)	15.6 (13.6 - 17.5)	14.5 (12.6 - 16.4)
	Female	0.8 (0.5 - 1.2)	2.1 (1.4 - 2.8)	2.7 (2.1 - 3.3)	5.5 (4.4 - 6.6)	5.2 (3.8 - 6.5)	5.6 (4.6 - 6.6)	5.2 (4.1 - 6.3)
Stole car	*Male*	2.7 (2.0 - 3.5)	3.3 (2.6 - 4.0)	3.9 (3.1 - 4.8)	4.2 (3.3 - 5.1)	4.3 (3.2 - 5.4)	4.0 (2.9 - 5.1)	2.8 (2.0 - 3.6)
	Female	1.4 (0.9 - 1.9)	1.3 (0.8 - 1.9)	2.2 (1.4 - 2.9)	3.2 (2.3 - 4.2)	2.2 (1.4 - 3.1)	1.3 (0.8 - 1.9)	1.1 (0.5 - 1.8)
Arrested	*Male*	3.9 (2.9 - 4.9)	5.5 (4.6 - 6.5)	8.1 (6.6 - 9.6)	7.6 (6.4 - 8.8)	7.6 (6.0 - 9.2)	8.9 (7.5 - 10.4)	8.5 (7.2 - 9.7)
	Female	1.0 (0.6 - 1.4)	2.7 (1.9 - 3.5)	3.1 (2.4 - 3.8)	4.8 (3.5 - 6.0)	3.6 (2.5 - 4.8)	3.4 (2.6 - 4.2)	3.1 (2.4 - 3.8)
Attacked Someone	*Male*	16.0 (14.6 - 17.3)	17.6 (16.1 - 19.2)	19.8 (18.0 - 21.5)	18.9 (16.8 - 21.0)	18.6 (16.3 - 21.0)	18.8 (16.9 - 20.8)	15.2 (13.1 - 17.4)
	Female	8.4 (6.9 - 9.8)	10.4 (9.2 - 11.6)	12.6 (11.2 - 14.1)	14.0 (11.7 - 16.4)	12.5 (10.9 - 14.1)	8.5 (7.3 - 9.8)	8.8 (7.3 - 10.4)
Drunk/high at school	*Male*	5.0 (4.2 - 5.9)	8.4 (7.0 - 9.8)	13.1 (11.8 - 14.4)	16.5 (14.6 - 18.3)	21.2 (19.1 - 23.3)	25.0 (22.8 - 27.3)	24.3 (21.9 - 26.8)
	Female	3.1 (2.4 - 3.8)	6.4 (5.2 - 7.6)	10.1 (8.6 - 11.5)	14.9 (12.9 - 16.8)	14.0 (12.0 - 15.9)	13.8 (12.2 - 15.4)	12.6 (11.0 - 14.3)
Gun to school	*Male*	1.4 (0.9 - 2.0)	1.4 (1.0 - 1.9)	1.8 (1.1 - 2.5)	2.8 (1.8 - 3.8)	2.8 (1.8 - 3.7)	2.9 (1.9 - 3.8)	2.0 (1.4 - 2.5)
	Female	0.2 (0.1 - 0.3)	0.4 (0 - 0.8)	0.3 (0.1 - 0.6)	1.2 (0.5 - 1.8)	0.4 (0.1 - 0.6)	0.3 (0.1 - 0.5)	0.6 (0.3 - 0.9)

Note: These are weighted prevalence rates. 95% confidence intervals of prevalence rates are reported in the parentheses.

Table 20. Prevalence of Delinquent Behaviors in the Past 12 Months Among Alabama Public School Students by Race/Ethnicity

	Hispanic [1]	Caucasian	African American	Native American/ Alaskan	Asian	Pacific Islander/ Hawaiian
Suspended	17.3 (15.2 - 19.5)	9.3 (8.8 - 9.9)	25.7 (24.4 - 27.0)	17.3 (14.2 - 20.5)	12.9 (8.5 - 17.3)	23.3 (15.8 - 30.9)
Carried gun	9.4 (7.5 - 11.3)	4.2 (3.9 - 4.5)	6.8 (6.2 - 7.4)	9.9 (7.8 - 12.0)	5.7 (2.7 - 8.6)	11.6 (6.2 - 17.1)
Sold drugs	10.3 (8.5 - 12.1)	6.4 (5.9 - 6.8)	5.7 (5.2 - 6.3)	9.6 (7.1 - 12.2)	9.1 (5.2 - 13.0)	12.7 (7.9 - 17.6)
Stole car	5.5 (4.1 - 6.8)	2.2 (2.0 - 2.4)	3.6 (3.2 - 4.1)	5.3 (3.5 - 7.0)	7.2 (3.4 - 10.9)	9.3 (4.9 - 13.6)
Arrested	7.9 (6.2 - 9.5)	4.4 (4.1 - 4.7)	6.0 (5.4 - 6.6)	7.2 (5.0 - 9.4)	7.7 (3.9 - 11.5)	8.9 (5.5 - 12.4)
Attacked someone	17.5 (15.4 - 19.7)	11.3 (10.8 - 11.8)	19.9 (18.8 - 20.9)	20.6 (17.6 - 23.6)	12.9 (8.7 - 17.2)	29.5 (20.4 - 38.7)
Drunk/high at school	17.1 (14.8 - 19.3)	13.3 (12.7 - 13.9)	12.1 (11.2 - 13.1)	17.9 (15.1 - 20.8)	13.2 (9.1 - 17.3)	19.0 (12.6 -25.4)
Gun to school	3.2 (2.4 - 4.1)	0.6 (0.5 - 0.7)	2.4 (2.0 - 2.7)	3.8 (2.4 - 5.3)	* *	5.5 (2.5 - 8.5)

Note: These are weighted prevalence rates. 95% confidence intervals of prevalence rates are reported in the parentheses.

Data are from 2002.

[*] "Hispanic" is viewed as an ethnicity; data included in this category may subsume Caucasian, African American, Native American/Alaskan, Asian, or Pacific Islander/Hawaiian.

* Estimate suppressed due to wide variance.

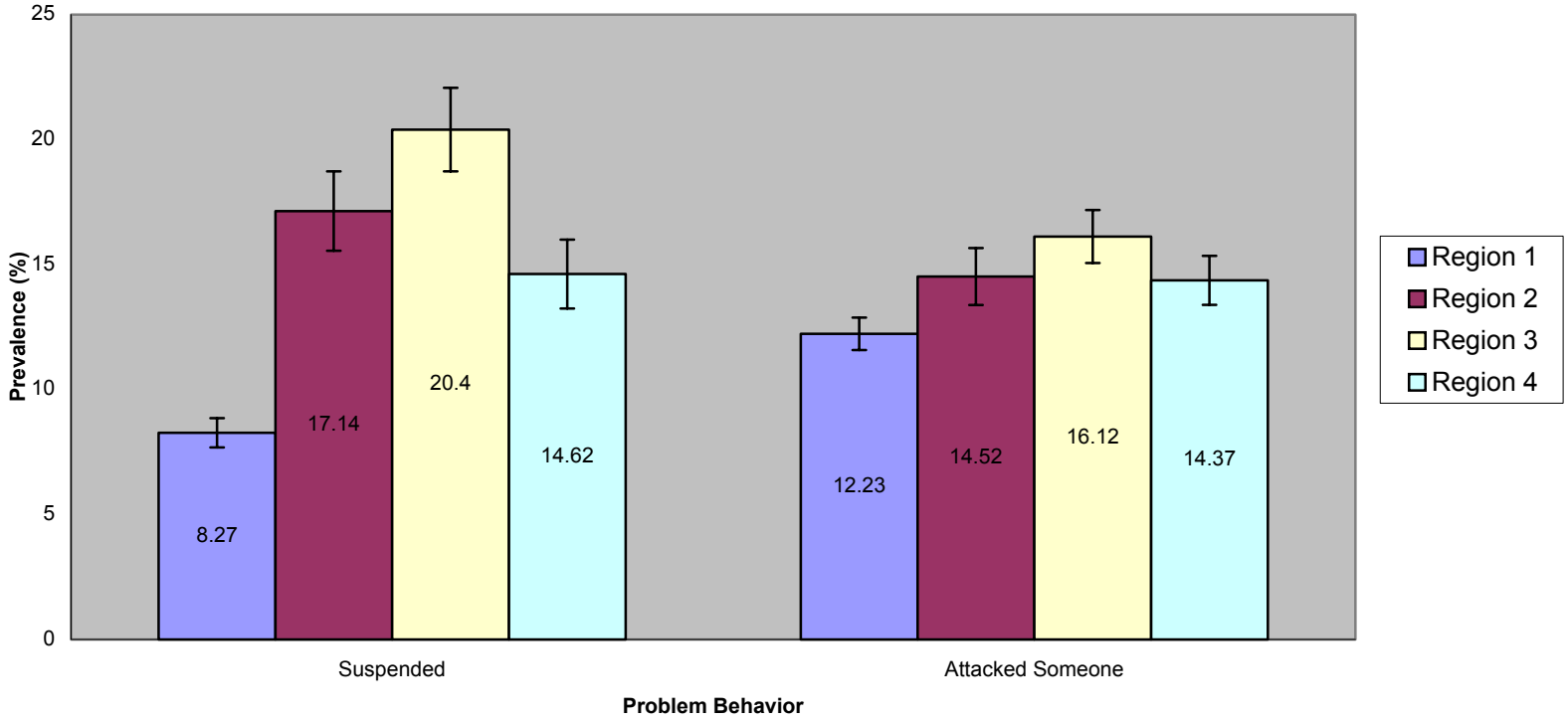

Figure 14. Prevalence rates of respondents who were suspended from school or attacked someone with the intent to harm within the past 12 months by health planning region. Error bars denote 95% confidence intervals.

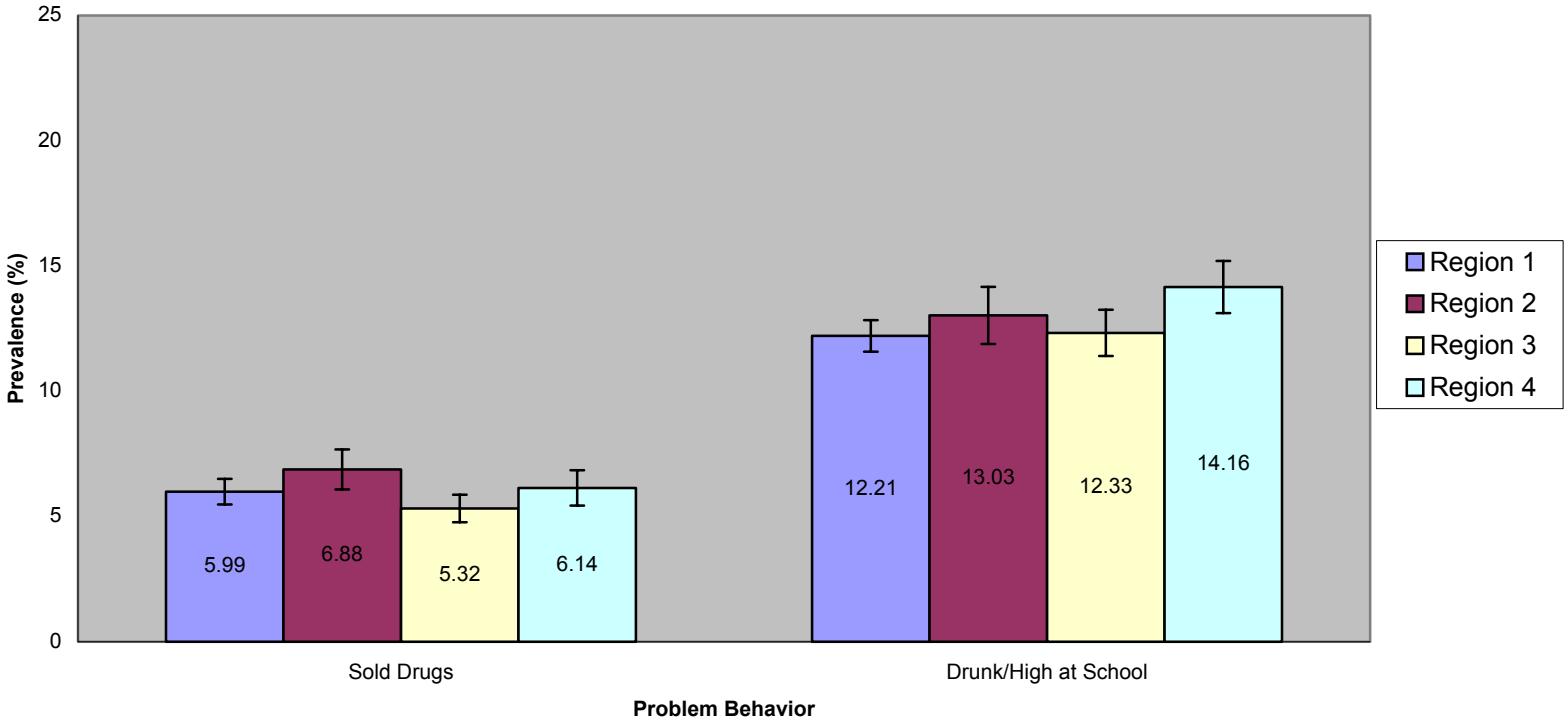

Figure 15. Prevalence rates of respondents who sold drugs or were drunk or high at school within the past 12 months by health planning region. Error bars denote 95% confidence intervals.

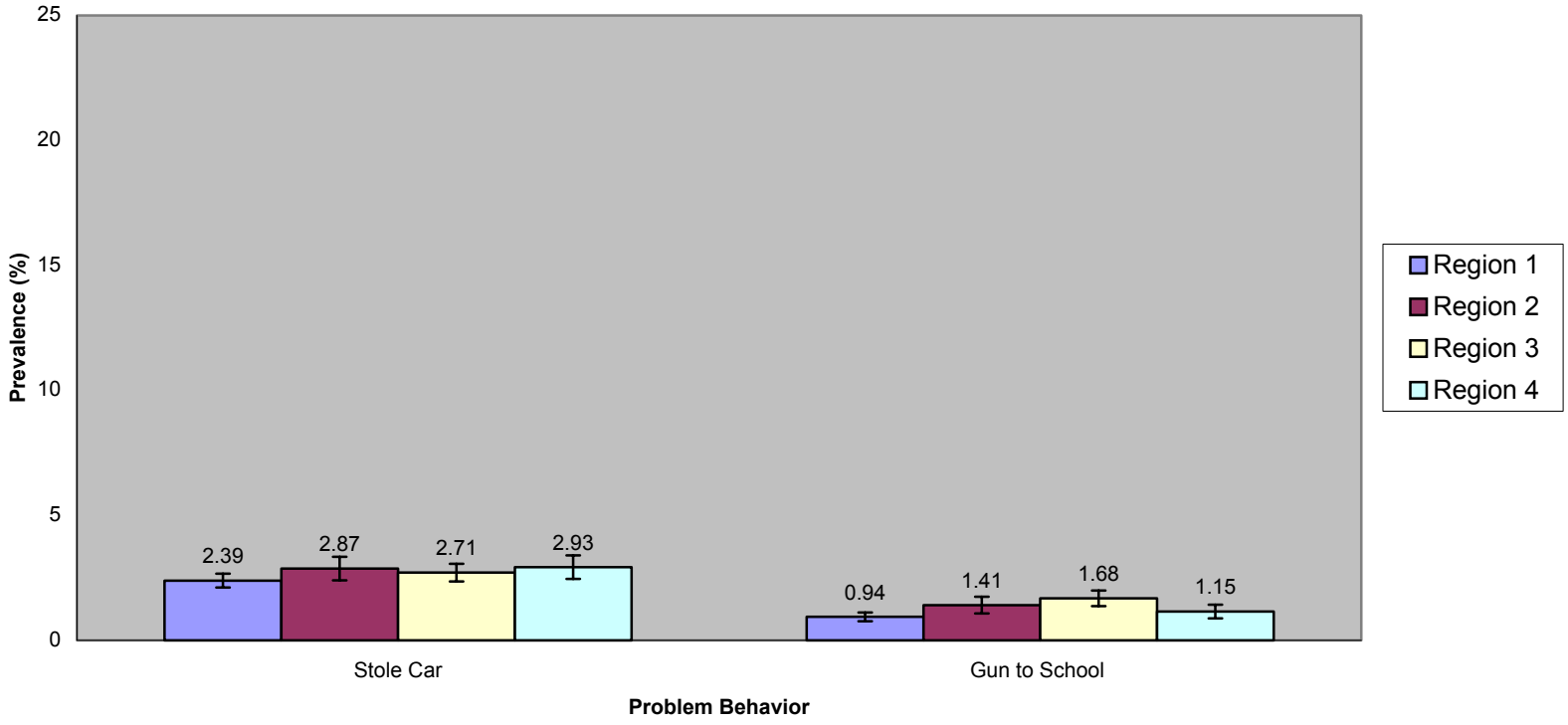

Figure 16. Prevalence rates of respondents who stole or attempted to steal a motor vehicle or carried a gun to school within the past 12 months by health planning region. Error bars denote 95% confidence intervals.

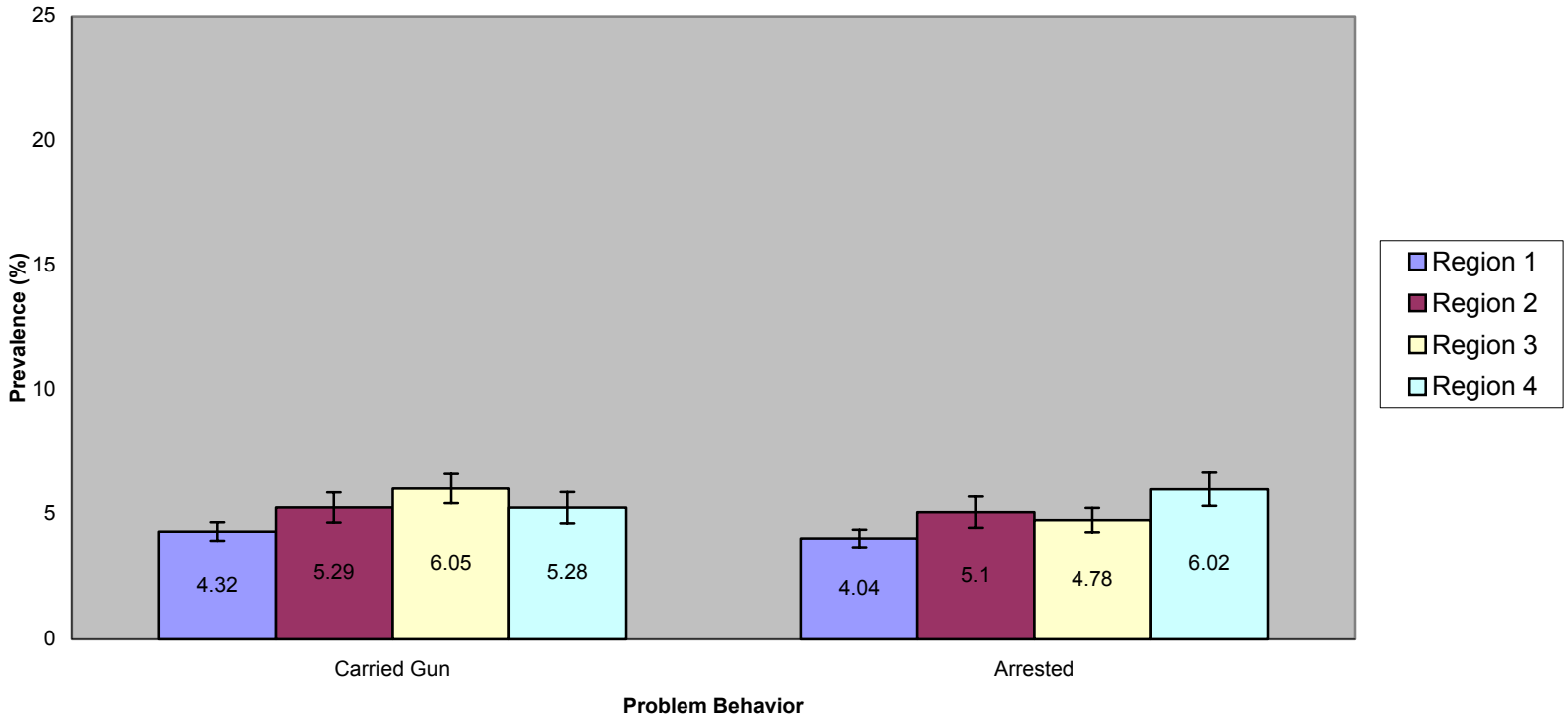

Figure 17. Prevalence rates of respondents who carried a gun or were arrested within the past 12 months by health planning region. Error bars denote 95% confidence intervals.

PREVALENCE OF RISK AND PROTECTIVE FACTORS

Based on analyses of the area under the receiver operating characteristic (AUROC) curve for the survey data, cutoff points were determined for 293 risk factor/substance use outcome combinations and for 44 protective factor/substance use outcome combinations. Of these, only 24 risk factor scale/substance use outcome combinations and 1 protective factor scale/substance use outcome combination were established to be informative (i.e., AUROC > .70) for all grades. A subset of the risk factor scale/substance use outcome combinations (friends' use of drugs; sensation seeking; favorable attitudes toward drugs use) was informative for all grades and all substance use outcomes. No protective factor scale/substance use outcome combinations were informative for all grades and all outcomes. For the sake of comparison between grades, only those 24 risk factor scale/substance use outcome combinations and 1 protective factor scale/substance use outcome combination that were informative for all grades were subjected to analyses for this report.

Risk and Protection Prevalence Rates by County

Using the cutoff points to dichotomize the scales, prevalence rates of risk and protection were then calculated. Prevalence rates for the 24 risk factor/substance use outcome combinations and 1 protective factor/substance use outcome combination are depicted by county in a series of maps (Figures 18 - 42). A transparency in Appendix L shows the regional boundaries. The reader may examine regional patterns in Figures 18 through 42 by removing the transparency from the appendix and laying it over the maps in Figures 18 through 42.

For the risk factor/substance use outcome combinations, counties shaded in blue tones have a lower proportion of students with that particular risk factor/substance use outcome combination while counties shade in red tones have a relatively higher proportion of students with that particular risk factor/substance use outcome combination. The inverse of this pattern holds for the lone protective factor/substance use outcome combination. That is, counties shaded in red tones have a lower proportion of students who are protected against marijuana use outcomes by the "perceived risk of drugs" factor, while counties shaded in blue tones have a relatively higher proportion of students who lack protection against marijuana use outcomes by the "perceived risk of drugs" factor. Eleven counties (Lauderdale, Hale, Wilcox, Macon, Bullock, Lee, Russell, Dale, Clay, Calhoun, and Coffee) did not yield data for the analyses of risk and protective factor/substance use outcomes and appear as being shaded white ("no data") in the maps. Counties that had low response rates (<40%) or that lacked data for the particular grades that a program addressed (e.g., Bullock yielded data for sixth grade only) composed the "no data" category.

Taken together, maps for alcohol and tobacco use outcomes were generally similar to each other across the different risk factors and characterized higher prevalence rates than maps for inhalants, marijuana, and other drug use outcomes. Prevalence rates within a particular risk factor/substance use outcome combination were generally homogeneous (i.e., staying within one set of colors, for instance, blue tones). The

extreme values of the scale (i.e., 0 to 20% and 80 to 100%) were not observed in any of the maps, indicating that the range of the prevalence rates of the risk factor/substance use outcome combinations tended to be relatively moderate.

The three substance use outcomes that were mapped for "community laws and norms favorable toward drug use" were not identical to each other, highlighting the notion that the same risk factor may have different prevalence rates for different substances. Maps for "community laws and norms favorable toward drug use"/marijuana (Figure 19) and "community laws and norms favorable toward drug use"/other drugs (Figure 20) were similar to each other; prevalence rates for these risk factor/substance use outcome combinations generally ranged between 30 and 60%. Most of the counties on the map for "community laws and norms favorable toward drug use"/alcohol (Figure 18), however, were shaded in yellow/orange (prevalence rates ranging between 50 and 80%). This map more closely resembled the map for "family history of antisocial behavior"/alcohol (Figure 22) than it did the maps for the other "community laws and norms favorable toward drug use"/substance use outcome combinations. Additionally, these comparisons suggest that prevalence rates for risk factor/substance use outcome combinations may be similar for different risk factors across the same substance use outcome (e.g., alcohol, marijuana).

The counties on the map depicting prevalence rates of the "perceived availability of drugs and handguns"/other drugs combination (Figure 21) were blue, indicating that the prevalence rates ranged between 20 and 50%. The two maps representing the antisocial behavior/substance use outcome combinations were identical to each other (Figures 23 and 24) and depicted generally low prevalence rates (ranging between 20 and 50%).

Disparate patterns emerged on the five maps corresponding to the favorable attitudes towards drug use/substance use outcome combinations (Figures 25 - 29). Maps for "favorable attitudes toward drug use"/marijuana, "favorable attitudes toward drug use"/inhalants, and "favorable attitudes toward drug use"/other drugs were similar to each other and depicted prevalence rates generally ranging between 30 and 50%. On the other hand, maps for "favorable attitudes toward drug use"/alcohol and "favorable attitudes toward drug use"/tobacco were more similar to each other than to the other "favorable attitudes toward drug use" maps, and depicted higher prevalence rates (ranging between 50 and 70%).

The patterns of maps characterizing "friends' use of drugs"/substance use outcomes (Figures 30 - 34) paralleled those of the "favorable attitudes toward drug use" maps. Counties in the "friends' use of drugs"/alcohol and "friends' use of drugs"/tobacco maps were shaded mostly in yellow, indicating that prevalence rates for these risk factor/substance use outcome combinations ranged between 50 and 70%. The maps for "friends' use of drugs"/marijuana, "friends' use of drugs"/inhalants, and "friends' use of drugs"/other drugs were predominantly blue, indicating that prevalence rates for these risk factor/substance use outcome combinations generally spanned the lower half of the scale. Additionally, "friends' use of drugs"/marijuana, "friends' use of

drugs"/inhalants, and "favorable attitudes toward drug use"/marijuana maps were strikingly similar. Prevalence rates for "interaction with antisocial peers"/substance use outcomes were the most heterogeneous of the risk factor/substance use outcome combinations (ranging between 30 and 80%), and the maps for "interaction with antisocial peers"/marijuana (Figure 35) and "interaction with antisocial peers"/other drugs (Figure 36) were identical to each other.

Consistent with the maps for the "favorable attitudes toward drug use" and "friends' use of drugs"/substance use outcome combinations, maps for the five "sensation seeking"/substance use outcome combinations were similar for some substance categories (Figures 37 - 41). That is, maps for "sensation seeking"/alcohol and "sensation seeking"/tobacco were more similar to each other than the other "sensation seeking" maps and depicted relatively higher prevalence rates (generally ranging between 50 and 70%), while maps for "sensation seeking"/marijuana, "sensation seeking"/other drugs, and "sensation seeking"/inhalants were comparable to each other and depicted prevalence rates generally ranging between 30 and 50%.

Counties on the map of the protective factor/substance use outcome combination were in shades of blue (Figure 42), indicating that the prevalence rates of protection afforded by perceived risk of drug use against marijuana use were relatively high (ranging between 50 and 70%) across counties.

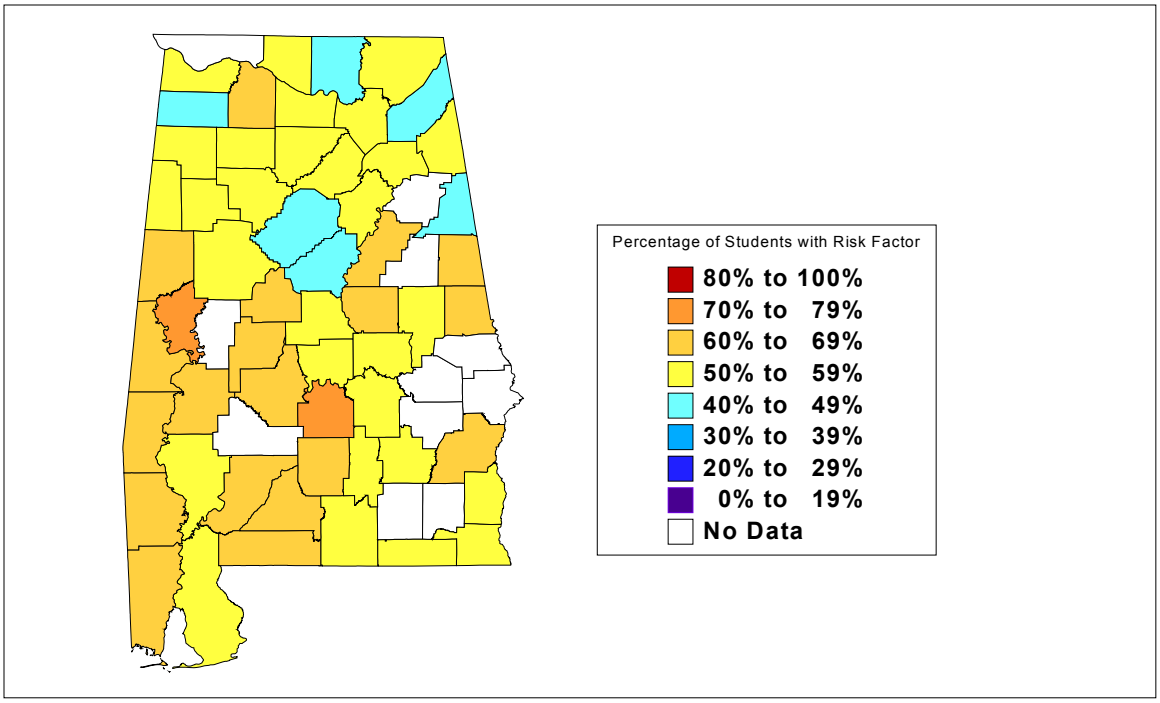

Figure 18. Percentages of respondents in each county who are at risk for alcohol use on the Community Laws and Norms Favorable to Drug Use risk factor.

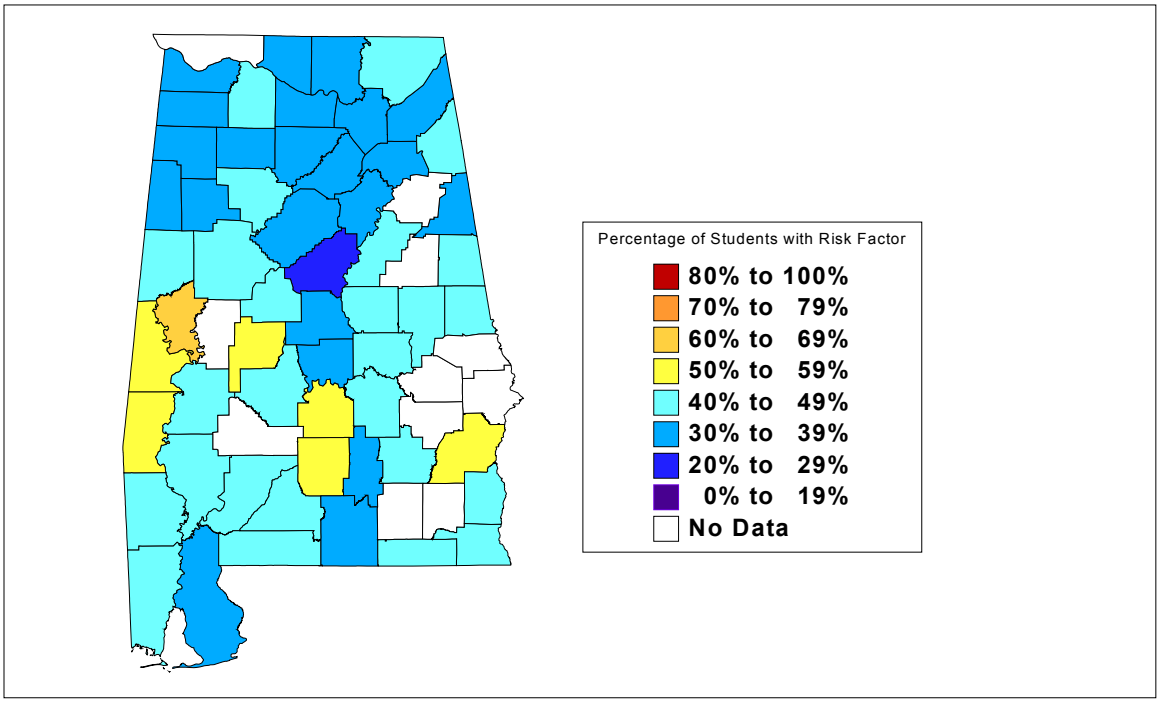

Figure 19. Percentages of respondents in each county who are at risk for marijuana use on the Community Laws and Norms Favorable to Drug Use risk factor.

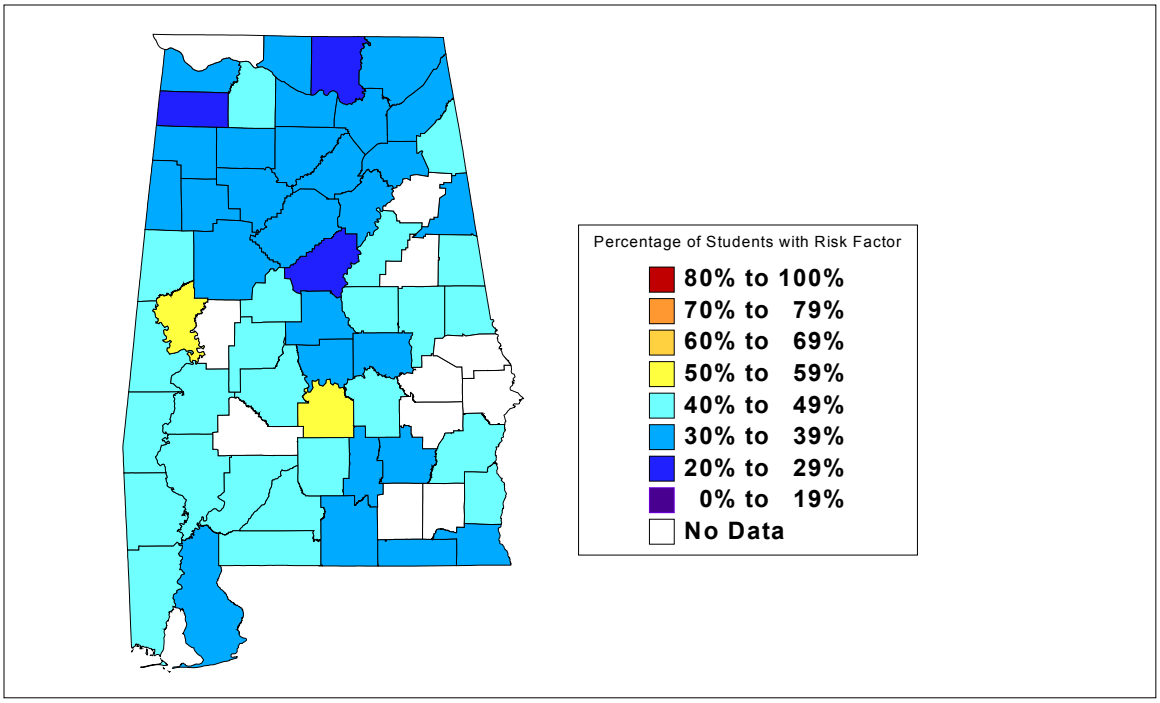

Figure 20. Percentages of respondents in each county who are at risk for other drug use on the Community Laws and Norms Favorable to Drug Use risk factor.

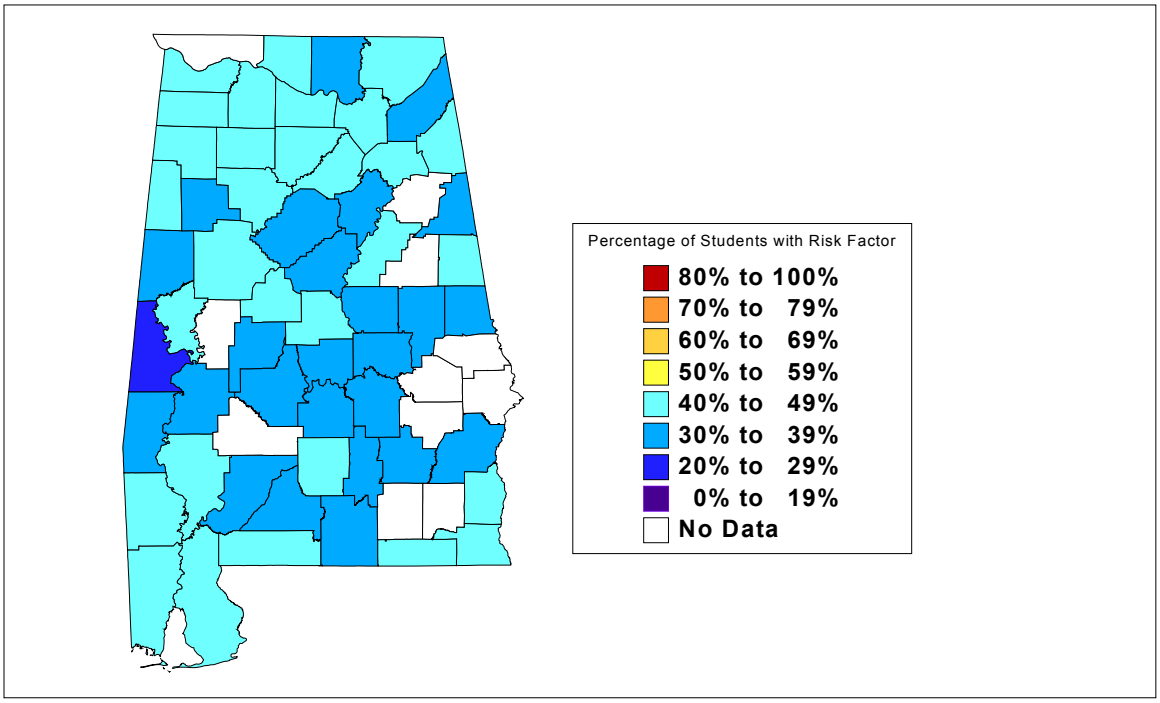

Figure 21. Percentages of respondents in each county who are at risk for other drug use on the Perceived Access to Alcohol, Tobacco, and Firearms risk factor.

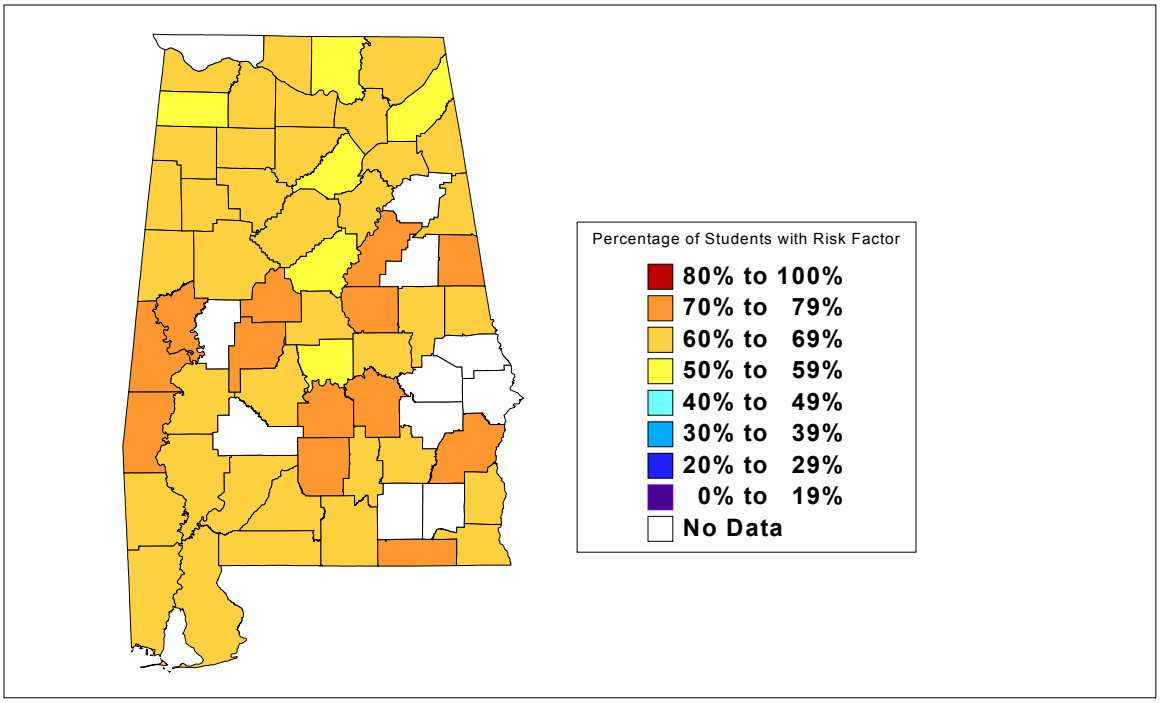

Figure 22. Percentages of respondents in each county who are at risk for alcohol use on the Family History of Antisocial Behavior risk factor.

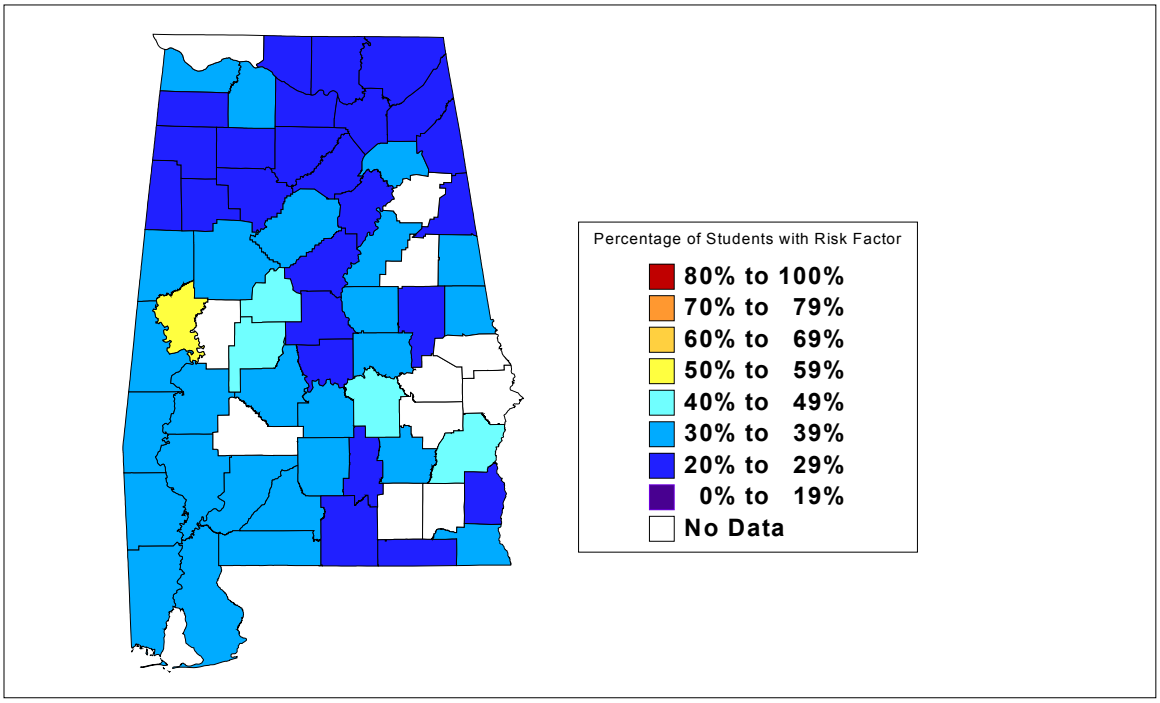

Figure 23. Percentages of respondents in each county who are at risk for marijuana use on the Antisocial Behavior risk factor.

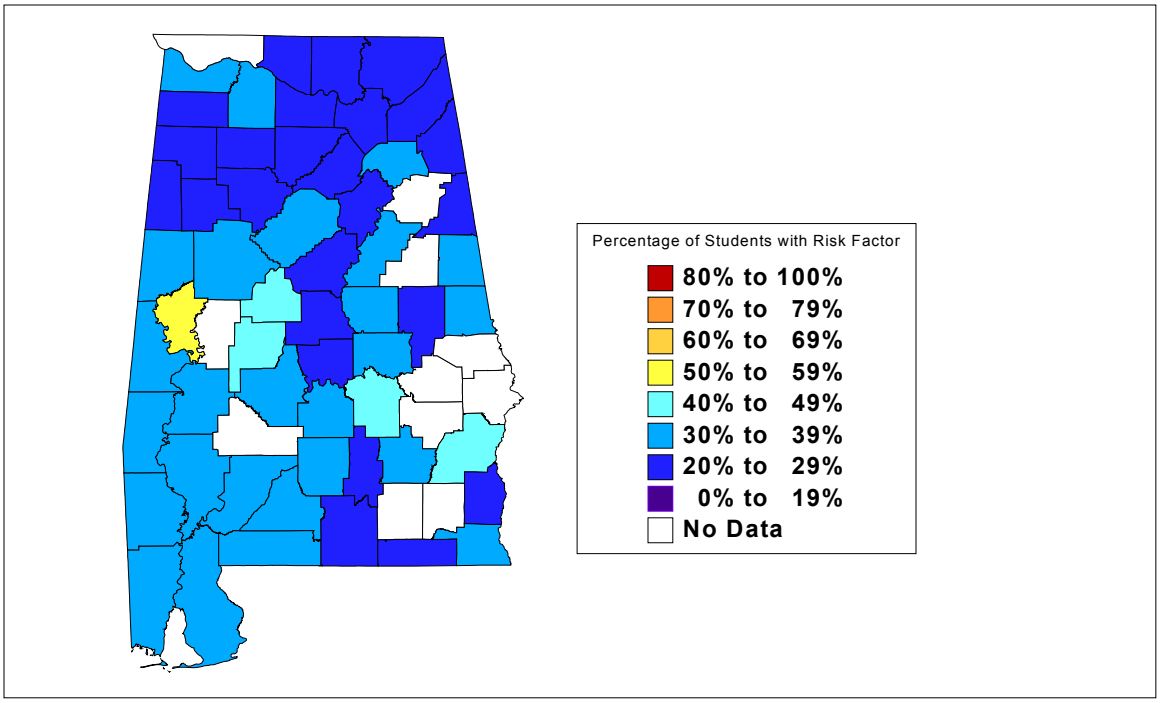

Figure 24. Percentages of respondents in each county who are at risk for other drug use on the Antisocial Behavior risk factor.

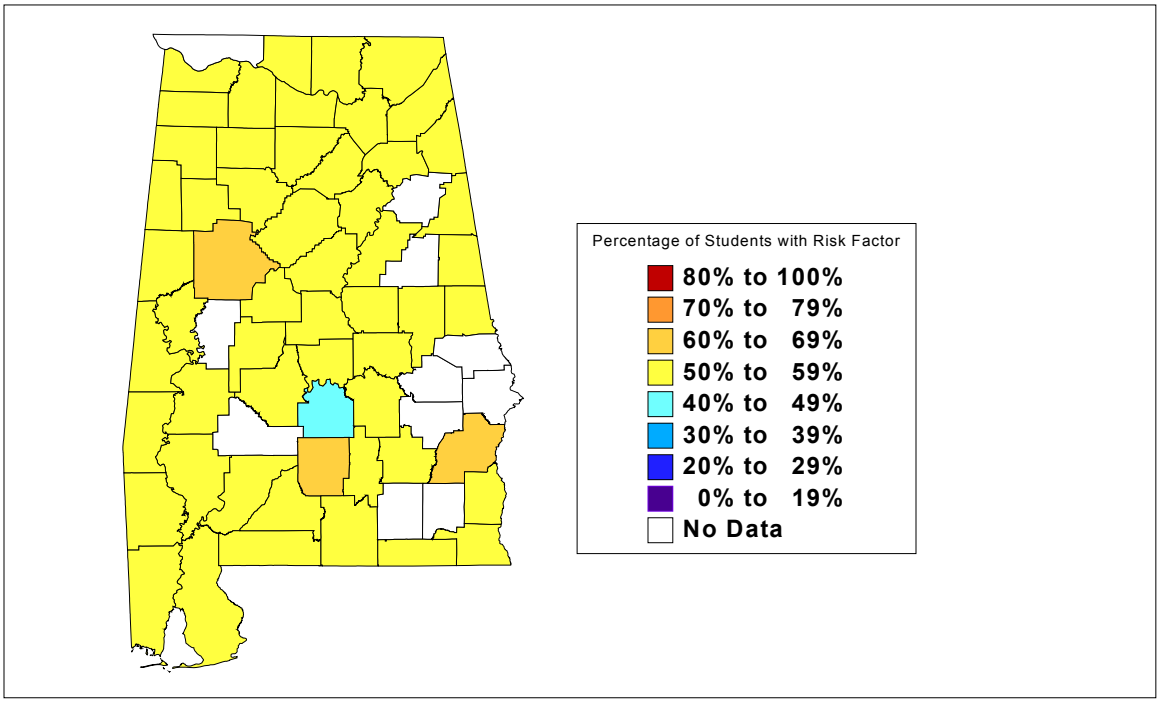

Figure 25. Percentages of respondents in each county who are at risk for alcohol use on the Attitudes Favorable Toward Drug Use risk factor.

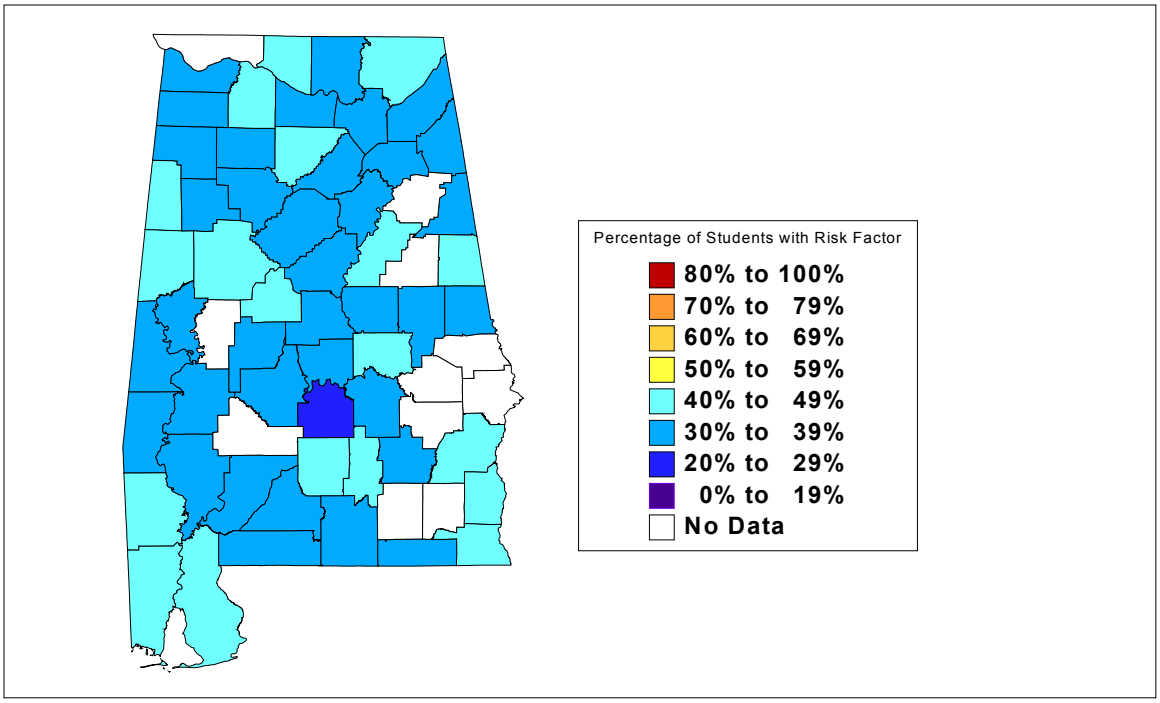

Figure 26. Percentages of respondents in each county who are at risk for marijuana use on the Attitudes Favorable Toward Drug Use risk factor.

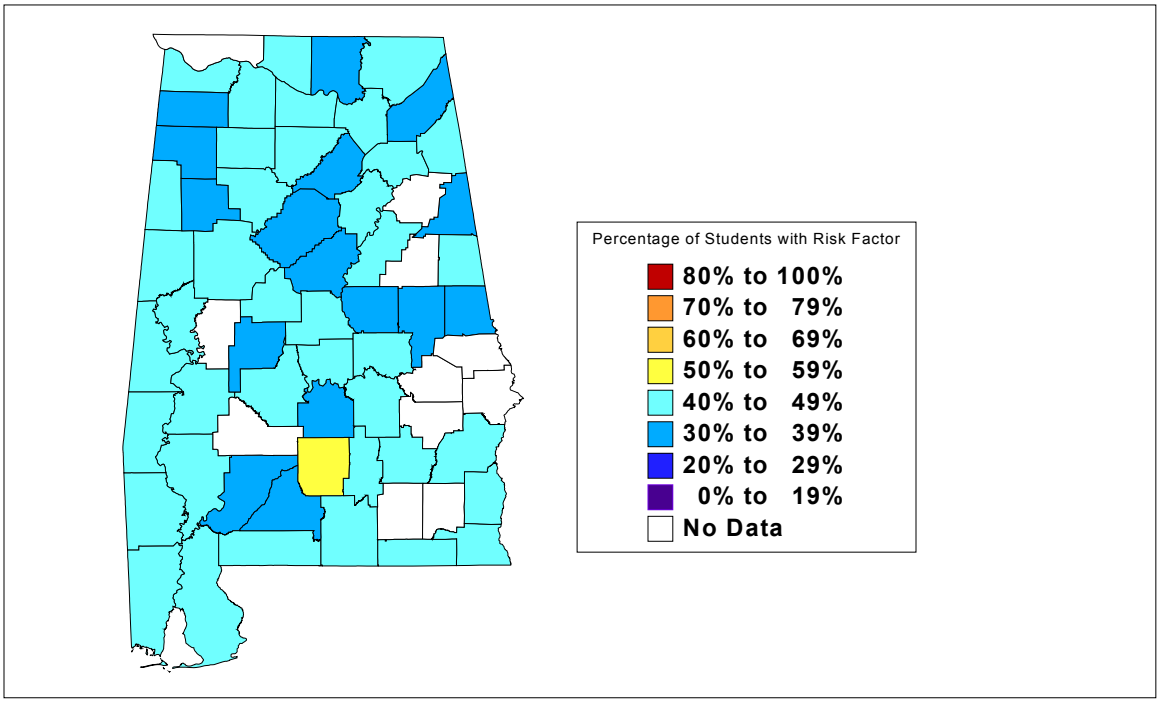

Figure 27. Percentages of respondents in each county who are at risk for inhalant use on the Attitudes Favorable Toward Drug Use risk factor.

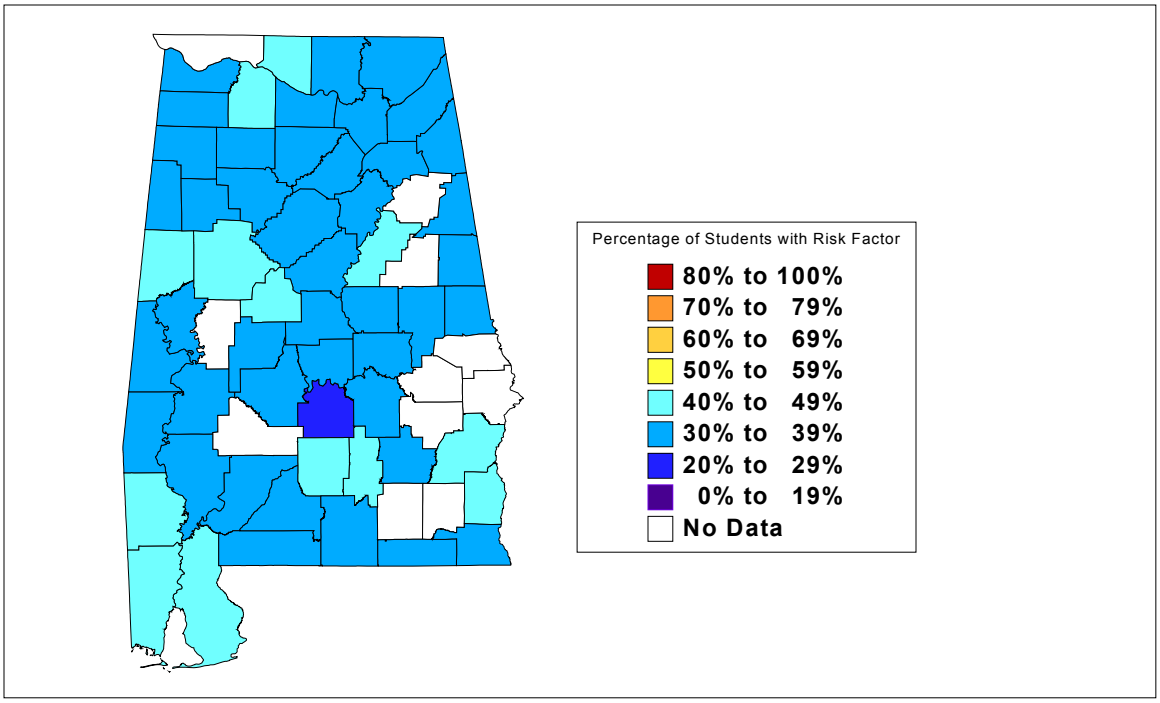

Figure 28. Percentages of respondents who are at risk for other drug use on the Attitudes Favorable Toward Drug Use risk factor.

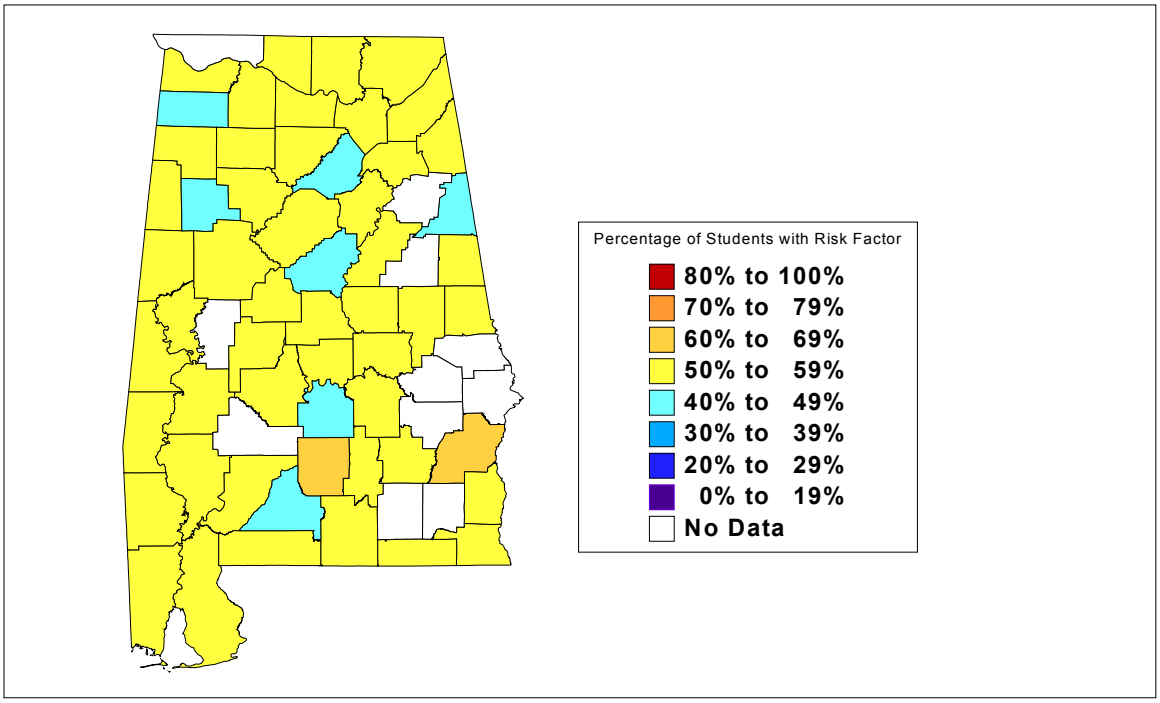

Figure 29. Percentages of respondents in each county who are at risk for tobacco use on the Attitudes Favorable Toward Drug Use risk factor.

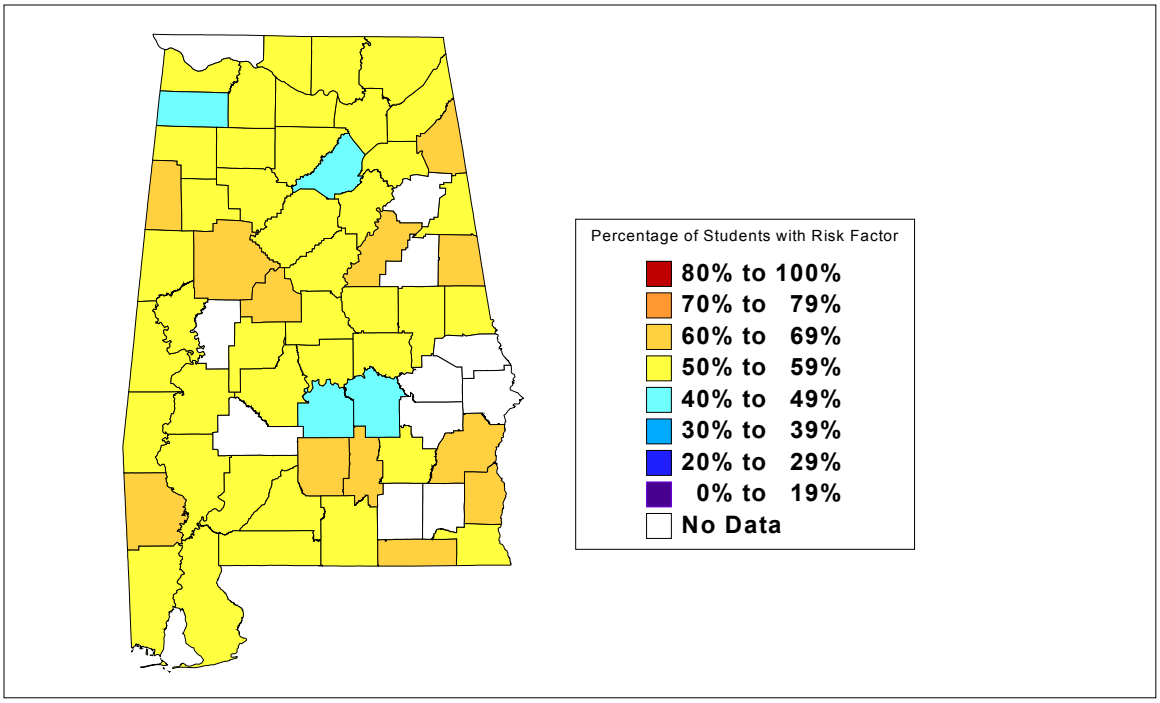

Figure 30. Percentages of respondents in each county who are at risk for alcohol use on the Friends' Use of Drugs risk factor.

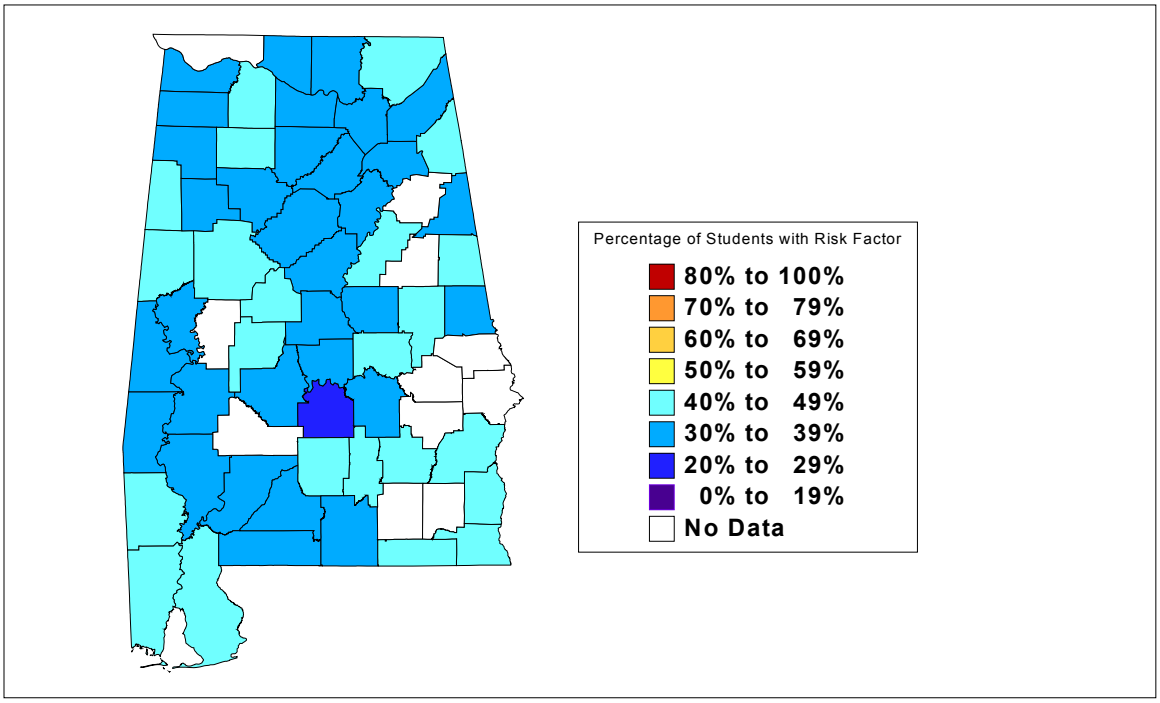

Figure 31. Percentages of respondents in each county who are at risk for marijuana use on the Friends' Use of Drugs risk factor.

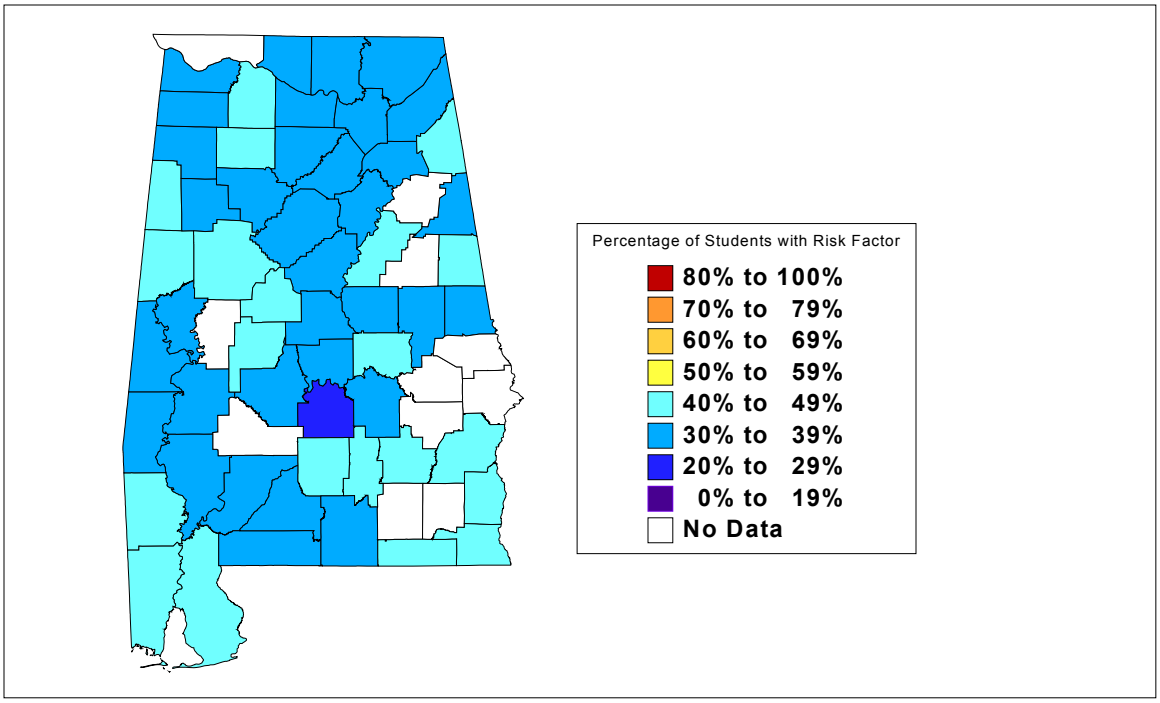

Figure 32. Percentages of respondents in each county who are at risk for inhalant use on the Friends' Use of Drugs risk factor.

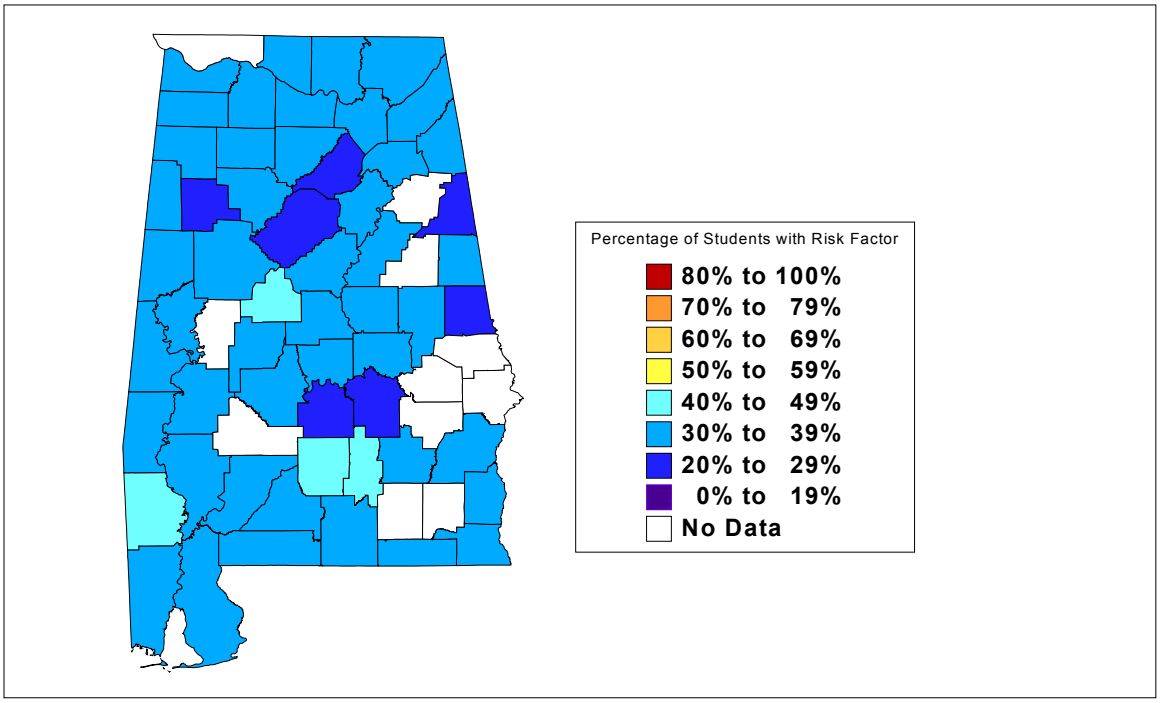

Figure 33. Percentages of respondents in each county who are at risk for other drug use on the Friends' Use of Drugs risk factor.

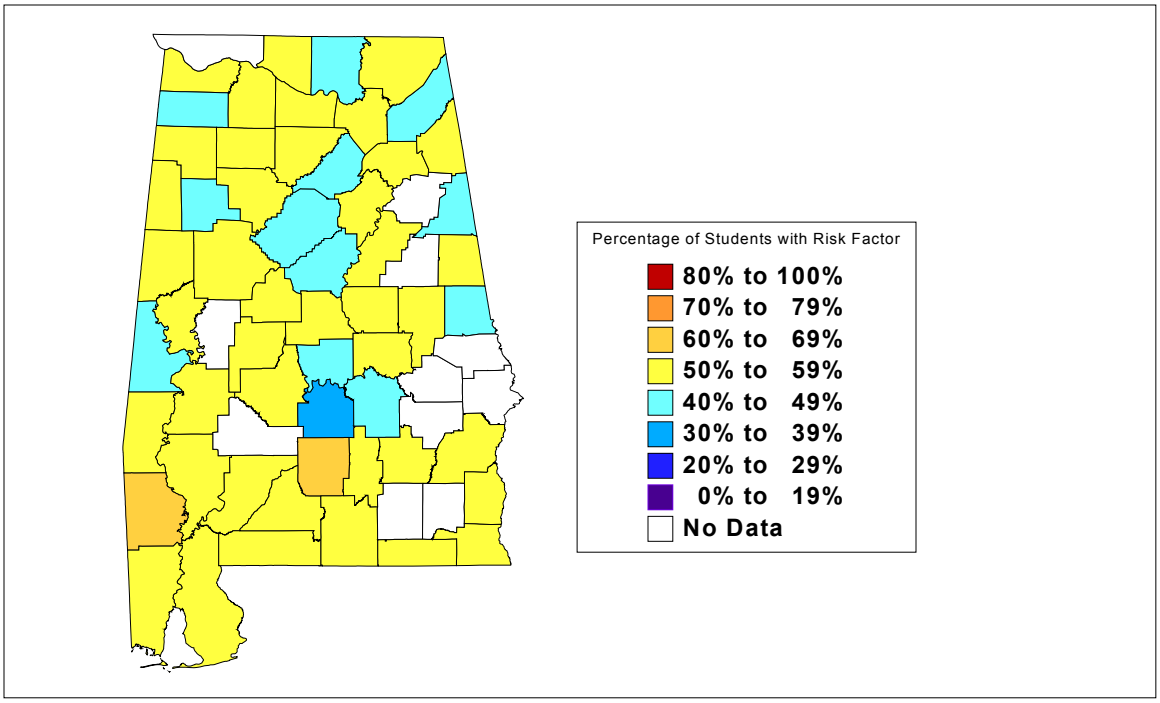

Figure 34. Percentages of respondents in each county who are at risk for tobacco use on the Friends' Use of Drugs risk factor.

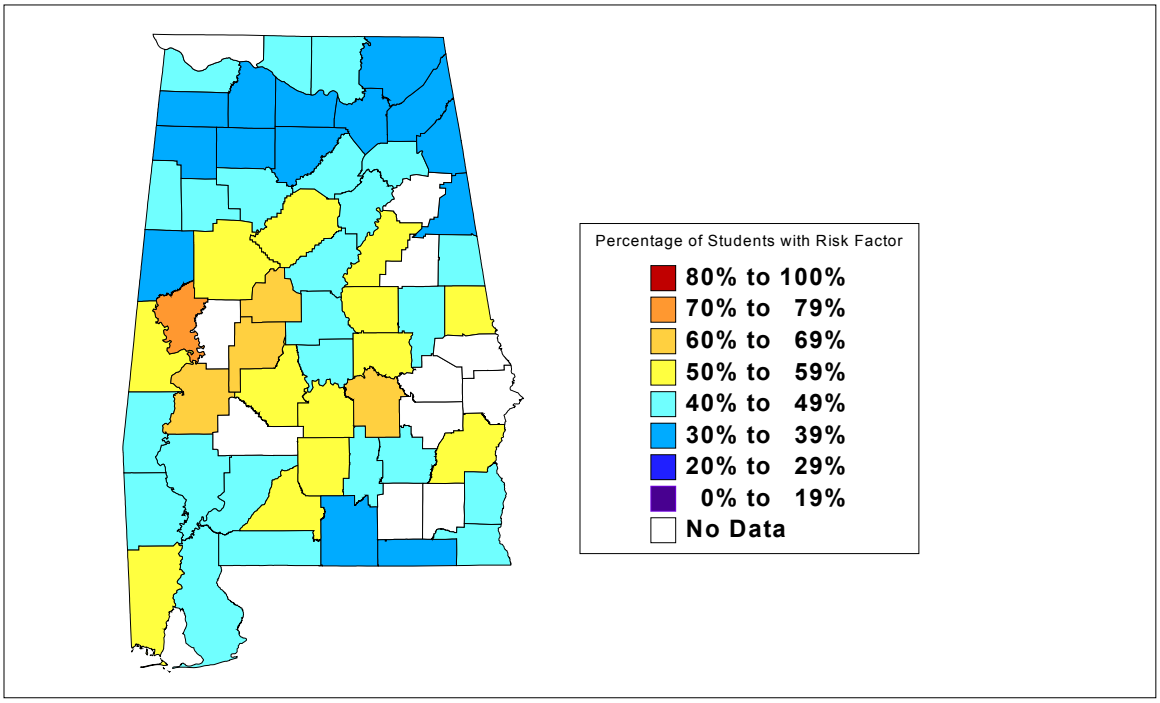

Figure 35. Percentages of respondents in each county who are at risk for marijuana use on the Interaction with Antisocial Peers risk factor.

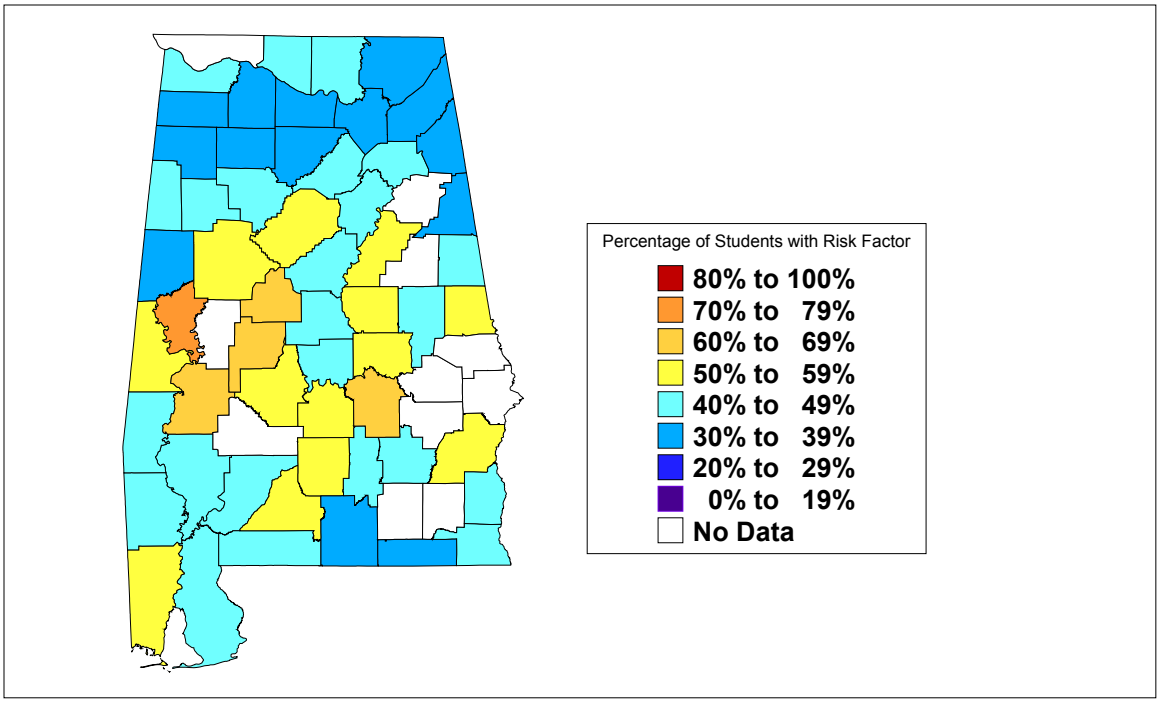

Figure 36. Percentages of respondents in each county who are at risk for other drug use on the Interaction with Antisocial Peers risk factor.

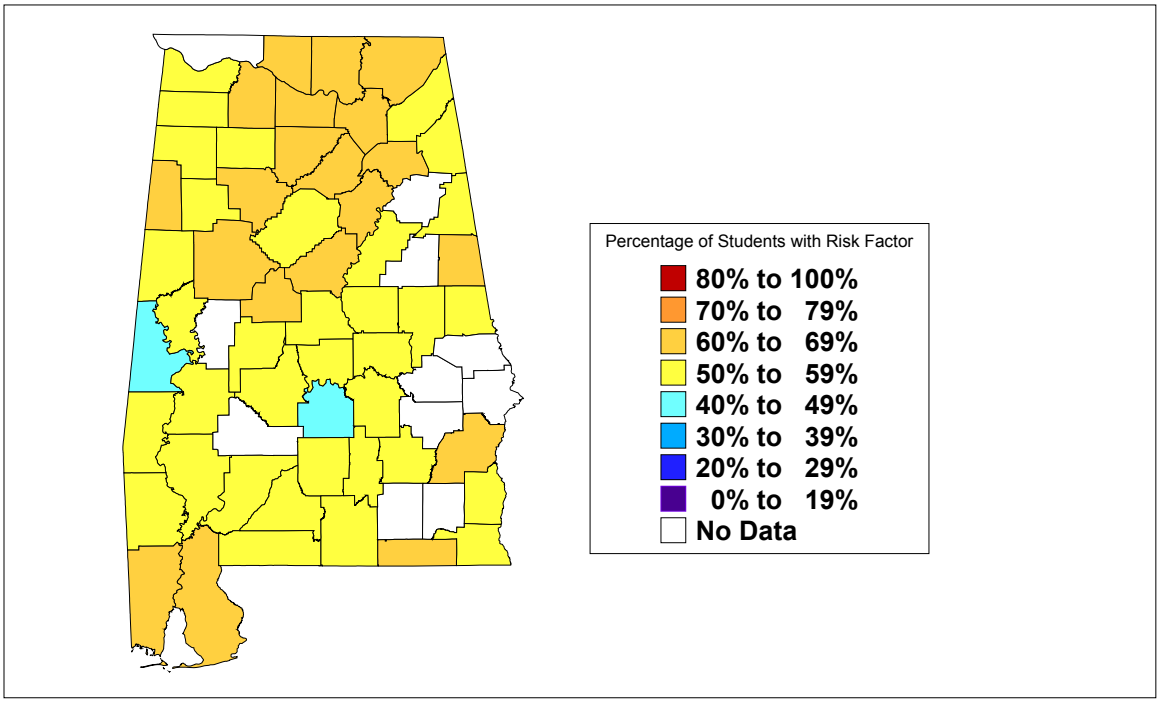

Figure 37. Percentages of respondents in each county who are at risk for alcohol use on the Sensation Seeking risk factor.

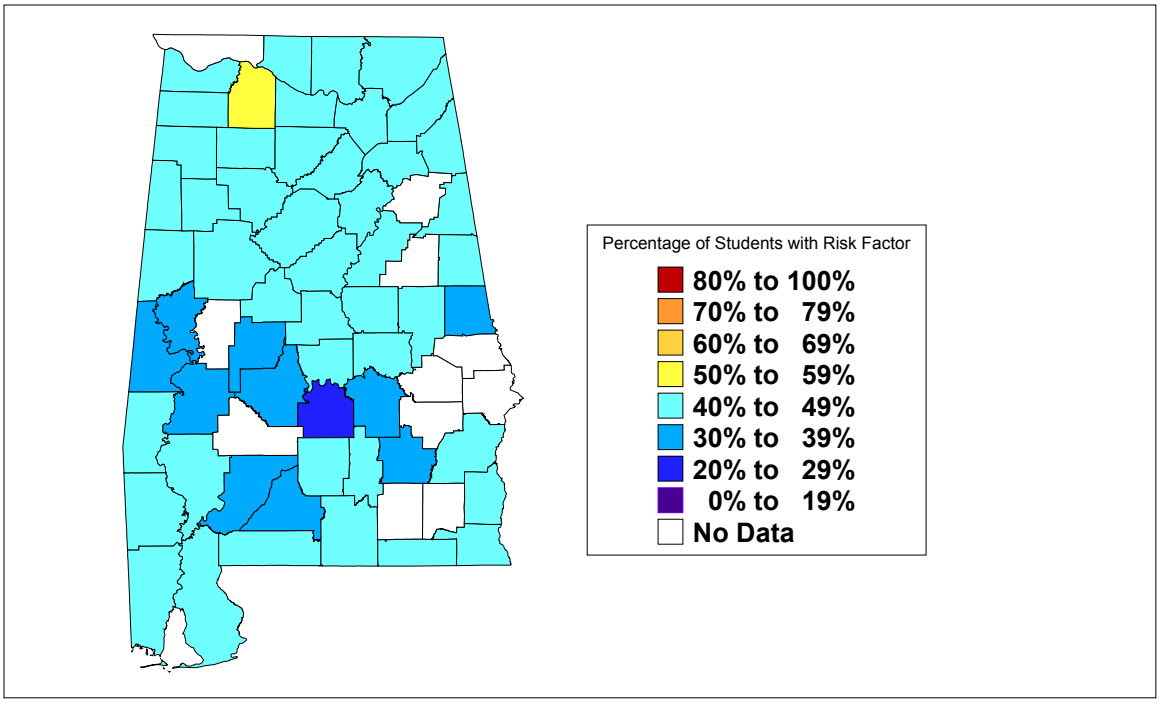

Figure 38. Percentages of respondents in each county who are at risk for marijuana use on the Sensation Seeking risk factor.

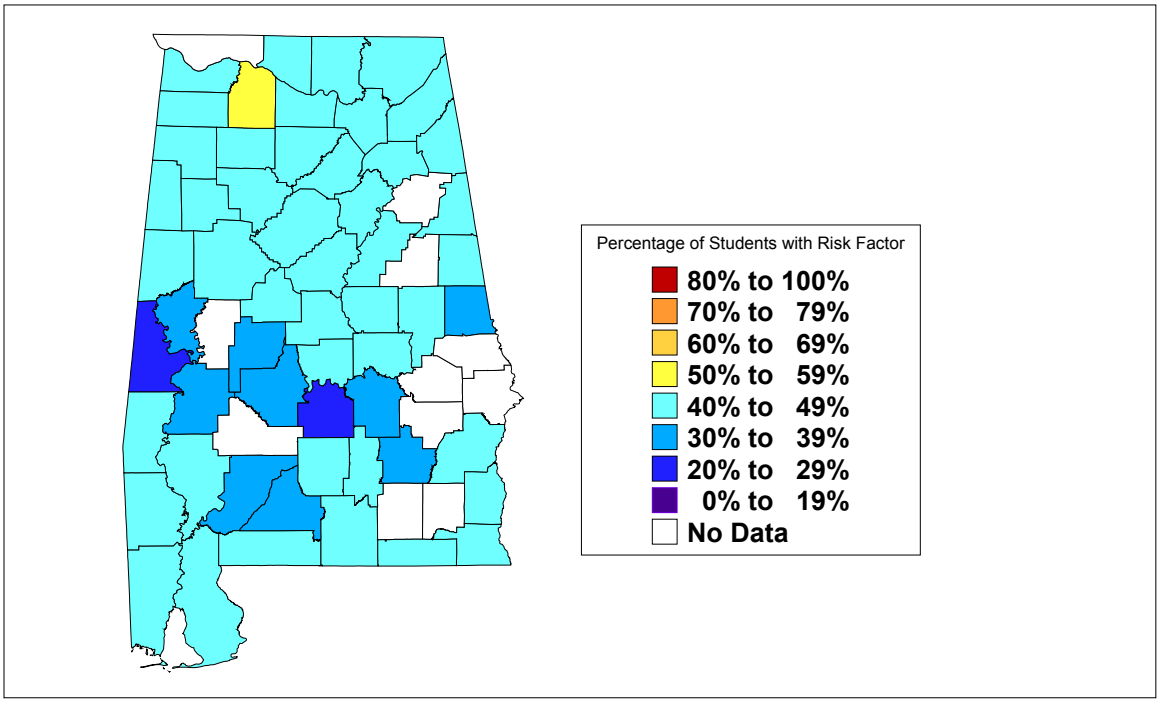

Figure 39. Percentages of respondents in each county who are at risk for inhalant use on the Sensation Seeking risk factor.

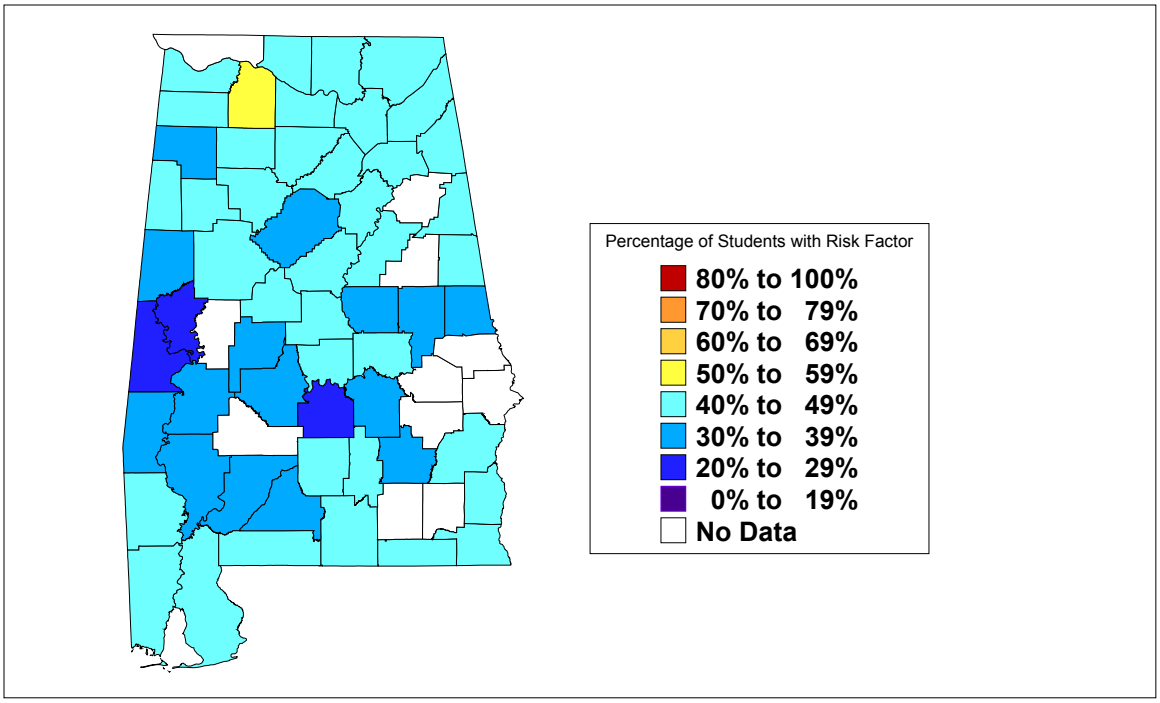

Figure 40. Percentages of respondents in each county who are at risk for other drug use on the Sensation Seeking risk factor.

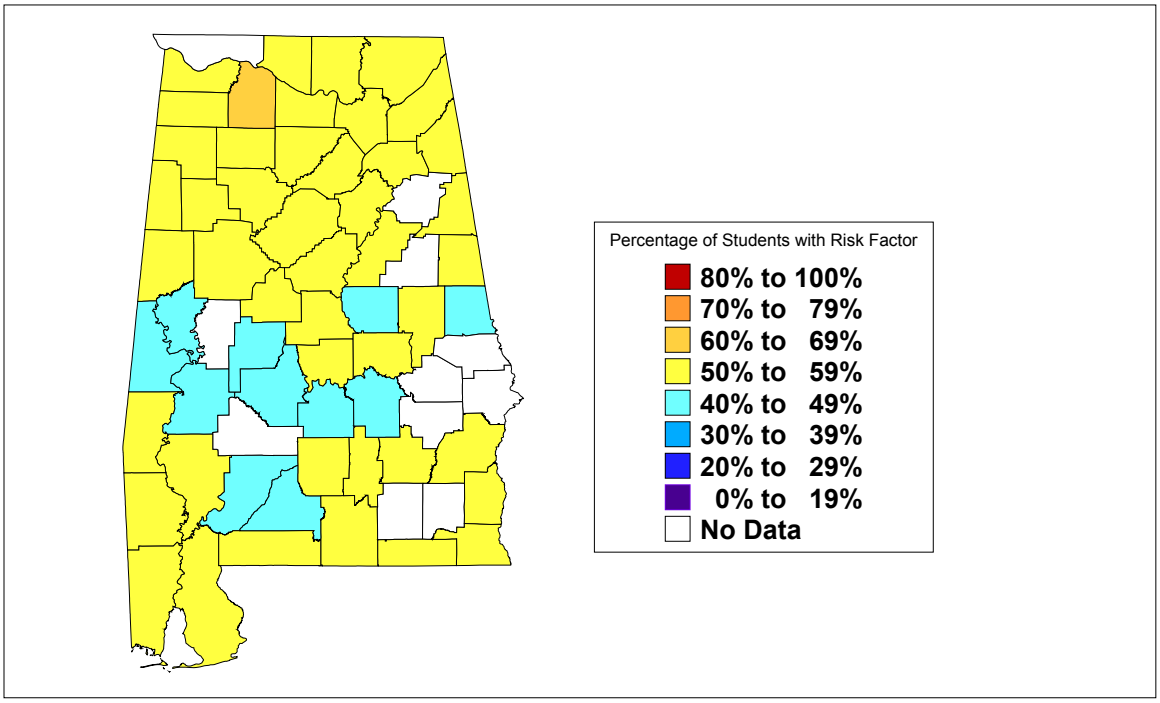

Figure 41. Percentages of respondents in each county who are at risk for tobacco use on the Sensation Seeking risk factor.

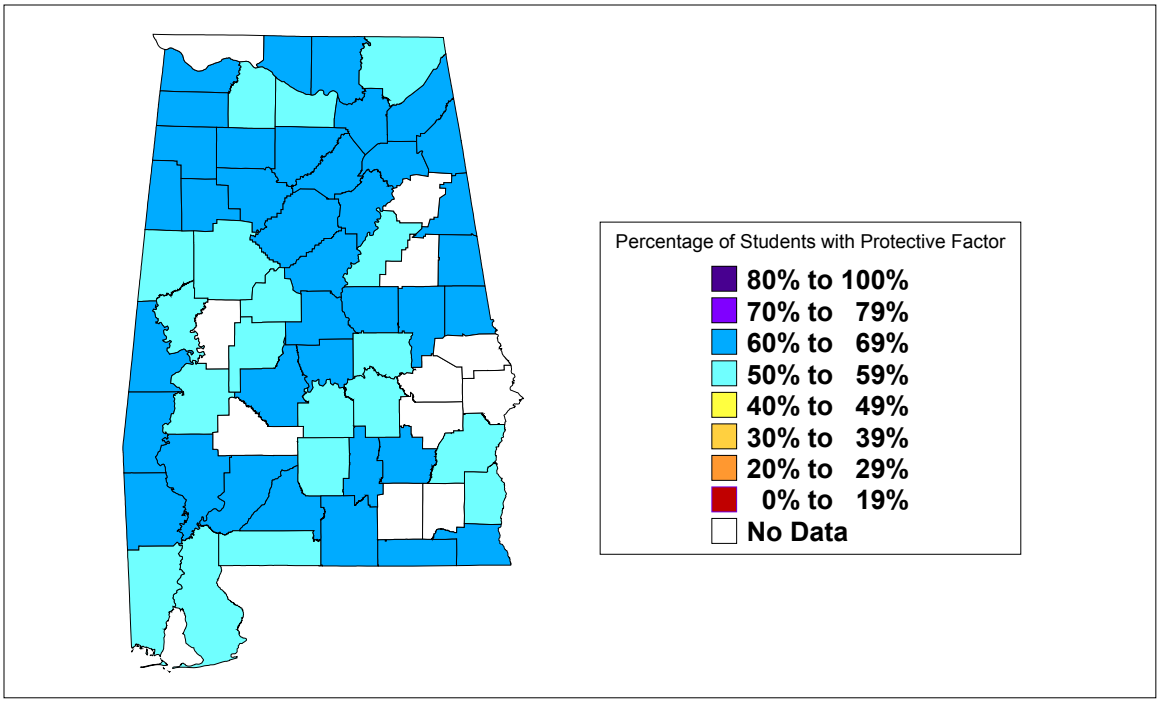

Figure 42. Percentages of respondents in each county who are protected against marijuana use by the Perceived Risk of Drug Use protective factor.

PREVALENCE OF NEED FOR PREVENTION PROGRAMMING

To fulfill some of the more pragmatic goals of the needs assessment study, an examination of the prevention programs that specifically address the risk and protective factors shown by students in the survey was conducted. These programs were chosen from the Western CAPT's list of best practices. Best practices include strategies and programs that have been considered to be research-based and have been shown through research and evaluation to effectively prevent or delay substance use. The list includes programs designated as "model" or "effective" programs by SAMHSA. Programs (see Table 21) that met selection criteria were incorporated into a database that was constructed to match prevention services with risk and protective factor needs.

Prevention programs that target specific risk and/or protective factors were suggested for each student in the survey, based upon the particular risk/protective factor scales upon which a student scored above the cutoff criterion. The student's school grade was also a consideration, as some programs are geared for high school students, while others target students in middle school. Some programs (e.g., Across Ages) were developed for students in high school or middle school. While some programs have been tested on different racial/ethnic groups, students' racial/ethnic characteristics were not considered in the program recommendations included in this report, as most programs have been examined and found to be effective with students of various groups. Additionally, as programs are constantly being implemented and evaluated, the efficaciousness of a program for students in a particular racial/ethnic group may be demonstrated on an ongoing basis.

Prevalence rates for program need were calculated by aggregating, by county, the number of instances that a particular program was recommended. Rates were calculated to err more on the side of recommending more programming rather than fiscal constraint (i.e., by recommending less programming). For example, prevalence rate denominators excluded students who scored below the cutoff criterion for all applicable risk/protective factors except one that had a missing value for that factor. Including these respondents in the denominator of programming prevalence rates most likely would have resulted in an underestimate of true programming need. Similarly, the denominators also excluded ineligible grades for a particular program. For instance, the Leadership and Resiliency Program is geared towards high school students; when the prevalence rates for the Leadership and Resiliency Program were computed, data from students who were not in grades 9-12 were excluded from the denominator.

Figures 43 - 58 contain county maps of prevalence rates for students in need of each program. Counties shaded in red tones demonstrated higher rates of need for programming while counties shaded in blue tones exhibited relatively lower rates of program need. The transparency in Appendix L will assist the reader in interpreting regional patterns. Regional boundaries can be seen by laying the transparency over the maps in Figures 43 through 58.

Eleven counties (Lauderdale, Hale, Wilcox, Macon, Bullock, Lee, Russell, Dale, Clay, Calhoun, and Coffee) did not yield data for the analysis of needed programs and appear as being shaded white ("no data") in the maps. Counties that had low response rates (<40%) or that lacked data for the particular grades that a program addressed (e.g., Bullock yielded data for sixth grade only) composed the "no data" category.

Recommendations for the Leadership and Resiliency Program (Figure 47) demonstrated the least diverse prevalence rates, as all of the counties with data (i.e., over 83% of counties) were shaded in red, indicating that at least 80% of respondents in these counties were in need of the program. Prevalence rates of need for Project Northland (Figure 52) ranged between 60 and 80%. Prevalence rates of need for several programs (Project Towards No Drug Abuse, Stop Teenage Addiction to Tobacco, Multi-Component School-Linked Community Approaches) generally ranged between 30 and 50% (Figures 55, 57, and 49). Given that Stop Teenage Addiction to Tobacco and Multi-Component School-Linked Community Approaches addressed the same set of risk factors (which, in this case, was only the perceived availability of substances and handguns in the community), the programming need prevalence rate maps for these two programs are identical. Several programs (Across Ages, Project ALERT, Strengthening Families, Creating Lasting Family Connections, and Positive Action) shared prevalence rates generally ranging between 50 and 80%, with very few counties exhibiting prevalence rates between 40 and 50% or between 80 and 100% (Figures 43, 51, 58, 46, 50). The prevalence rates of program need for Athletes Training and Learning to Avoid Steroids, CASASTART, Life Skills Training, SMART leaders, Project STATUS, and Project STAR programs showed the least homogeneity and ranged between 20 and 100% (Figures 44, 45, 48, 56, 54, and 53). The majority of counties demonstrated rates of prevalence need ranging between 40 and 70% for these programs.

Table 21. Information on Prevention Programs Recommended for Alabama's Youth

Name of Program	Where to Find Information About Program
Across Ages	http://modelprograms.samhsa.gov/pdfs/FactSheets/AcrossAges.pdf
Project ALERT	http://modelprograms.samhsa.gov/pdfs/FactSheets/Project%20ALERT.pdf
Athletes Training & Learning to Avoid Steroids	http://modelprograms.samhsa.gov/pdfs/FactSheets/Atlas.pdf
CASASTART	http://modelprograms.samhsa.gov/pdfs/FactSheets/CASA.pdf
Creating Lasting Family Connections	http://modelprograms.samhsa.gov/pdfs/FactSheets/Clfc.pdf
Leadership and Resiliency Program	http://modelprograms.samhsa.gov/pdfs/FactSheets/leadership.pdf
Life Skills Training	http://modelprograms.samhsa.gov/pdfs/FactSheets/lifeskills.pdf
Multi-Component School-Linked Community Approaches	http://casatweb.ed.unr.edu/cgi-bin/WebObjects/Step6.woa/wa/getList
Project Northland	http://modelprograms.samhsa.gov/pdfs/FactSheets/Project%20North.pdf
Positive Action	http://modelprograms.samhsa.gov/pdfs/FactSheets/Positive%20Action.pdf
Project Towards No Drug Abuse	http://modelprograms.samhsa.gov/pdfs/FactSheets/Project%20TND.pdf
Strengthening Families Program (SFP-I, and SFP for Parents and Youth 10-14)	SFP-I: http://modelprograms.samhsa.gov/pdfs/FactSheets/StrengthFP.pdf SFP for Parents and Youth 10-14 : http://modelprograms.samhsa.gov/template_cf.cfm?page=model&pkProgramID=179
SMART leaders	http://casatweb.ed.unr.edu/cgi-bin/WebObjects/Step6.woa/wa/getList
Project STAR	http://www.northeastcapt.org/science/pod/detail.asp?ID=111
Stop Teenage Addiction to Tobacco	http://casatweb.ed.unr.edu/cgi-bin/WebObjects/Step6.woa/wa/getList
Project STATUS	http://casatweb.ed.unr.edu/cgi-bin/WebObjects/Step6.woa/wa/getList

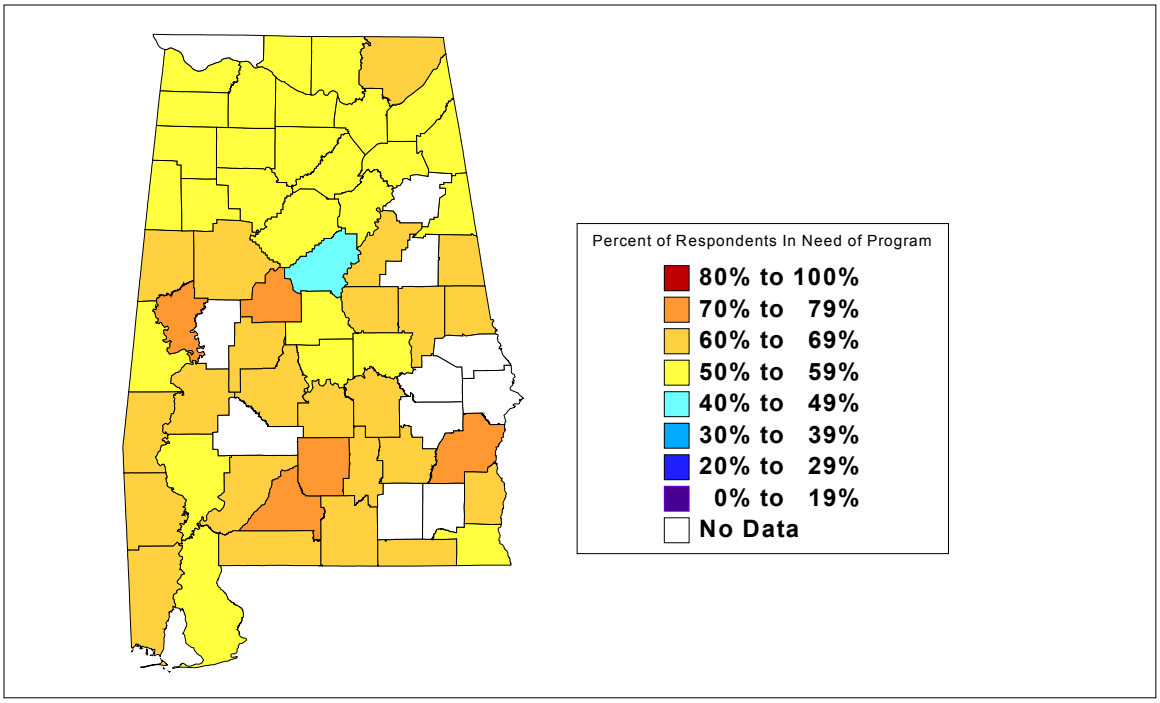

Figure 43. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Across Ages.

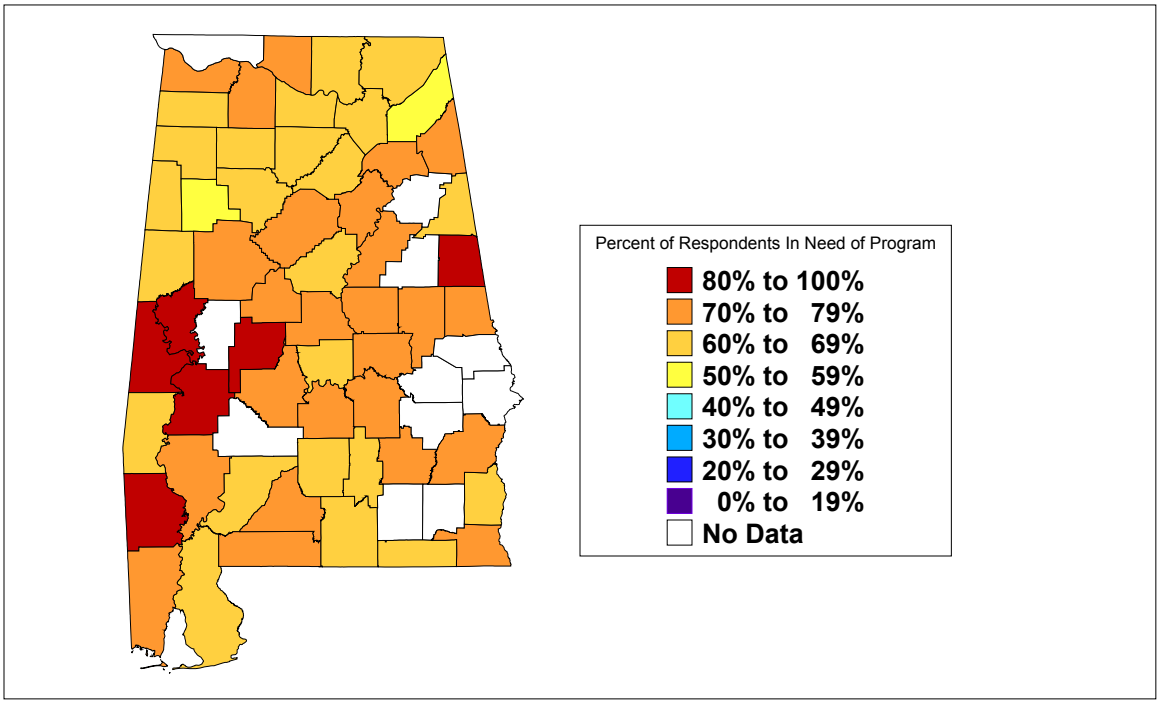

Figure 44. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Athletes Training & Learning to Avoid Steroids.

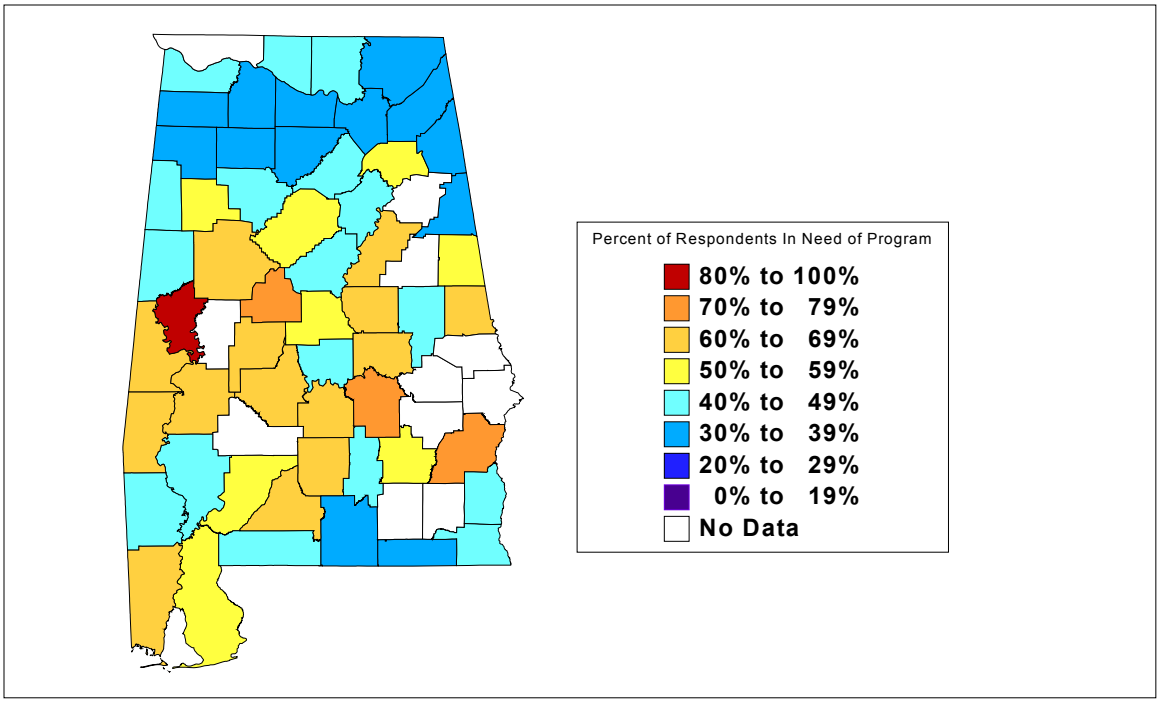

Figure 45. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for CASASTART.

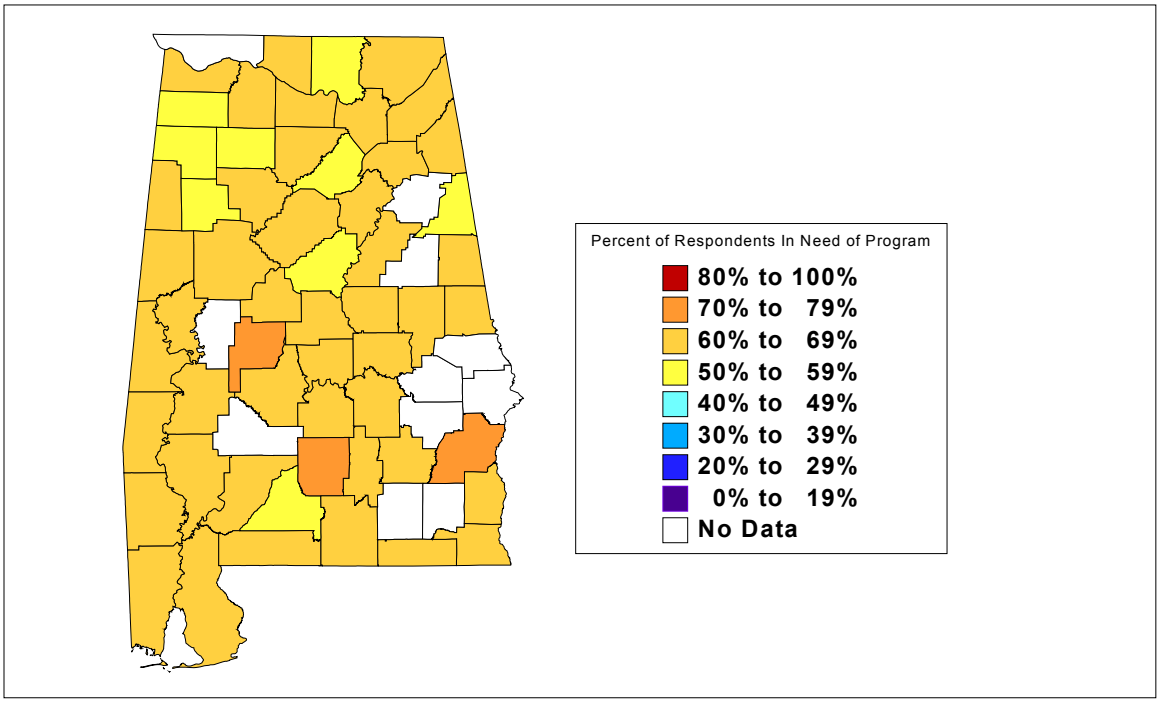

Figure 46. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Creating Lasting Family Connections.

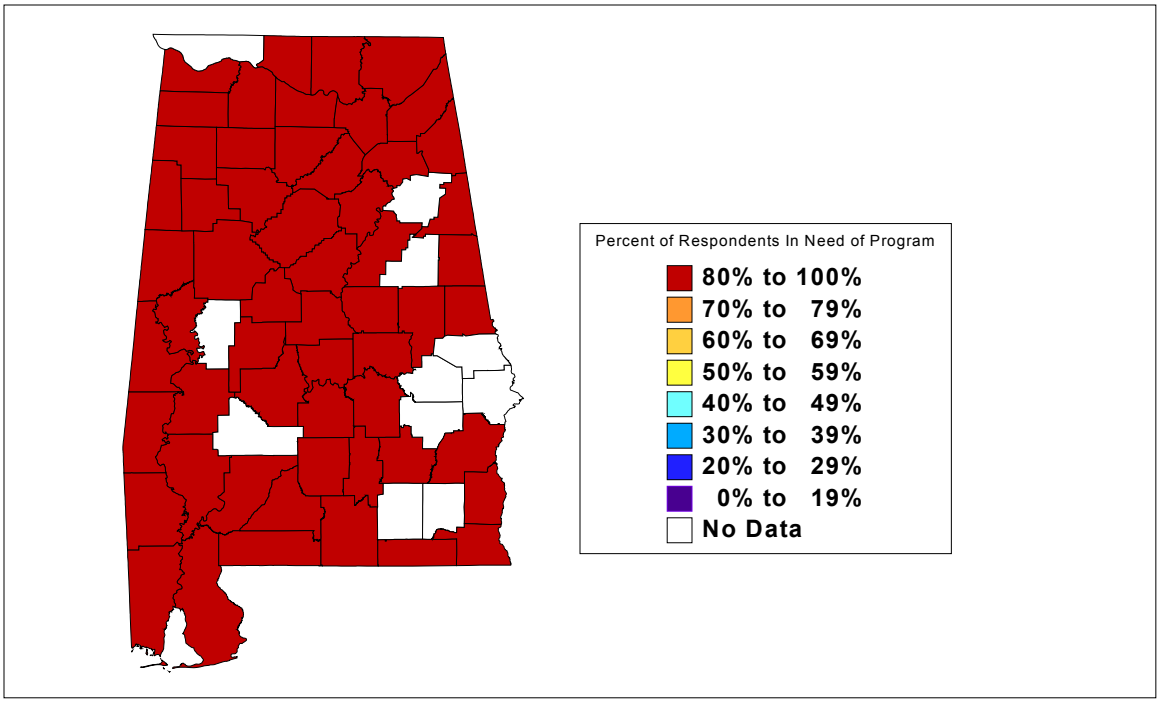

Figure 47. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for the Leadership and Resiliency Program.

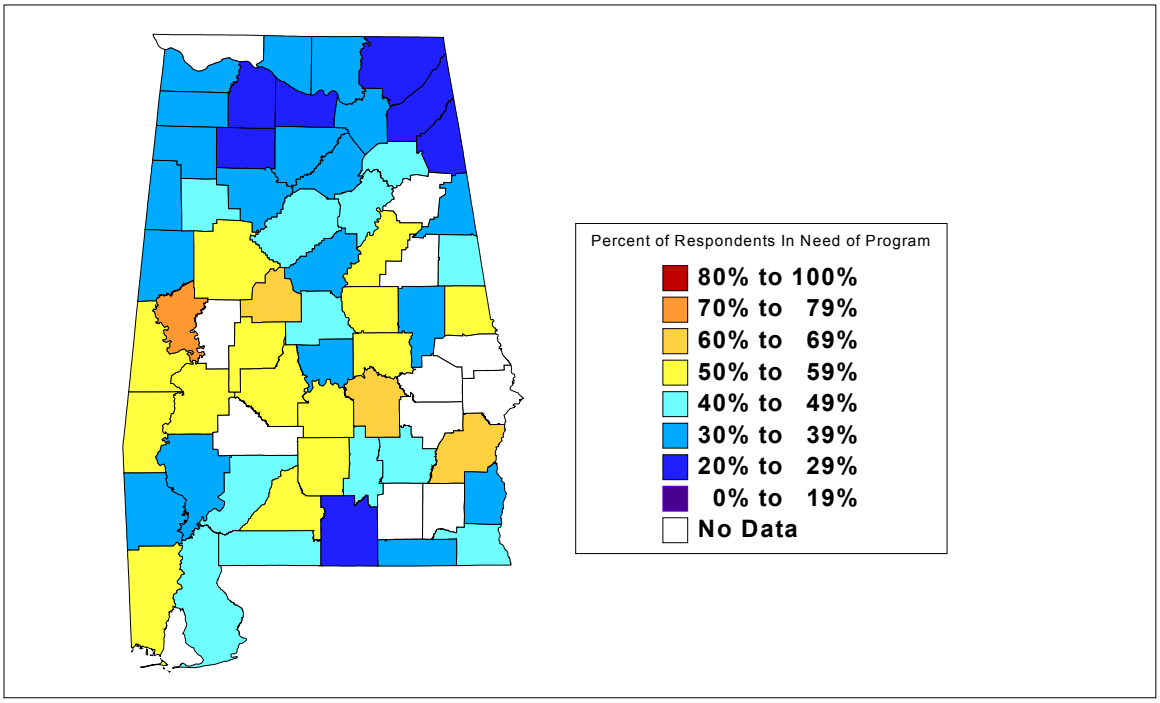

Figure 48. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Life Skills Training.

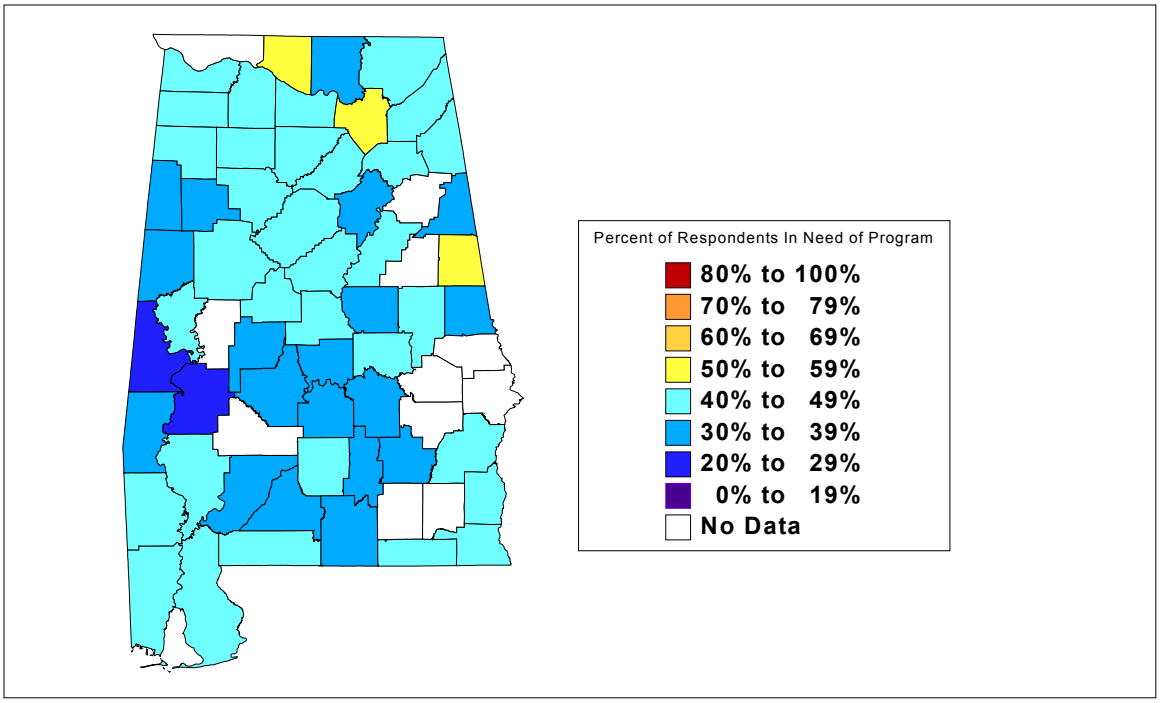

Figure 49. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Multi-Component School-Linked Community Approaches.

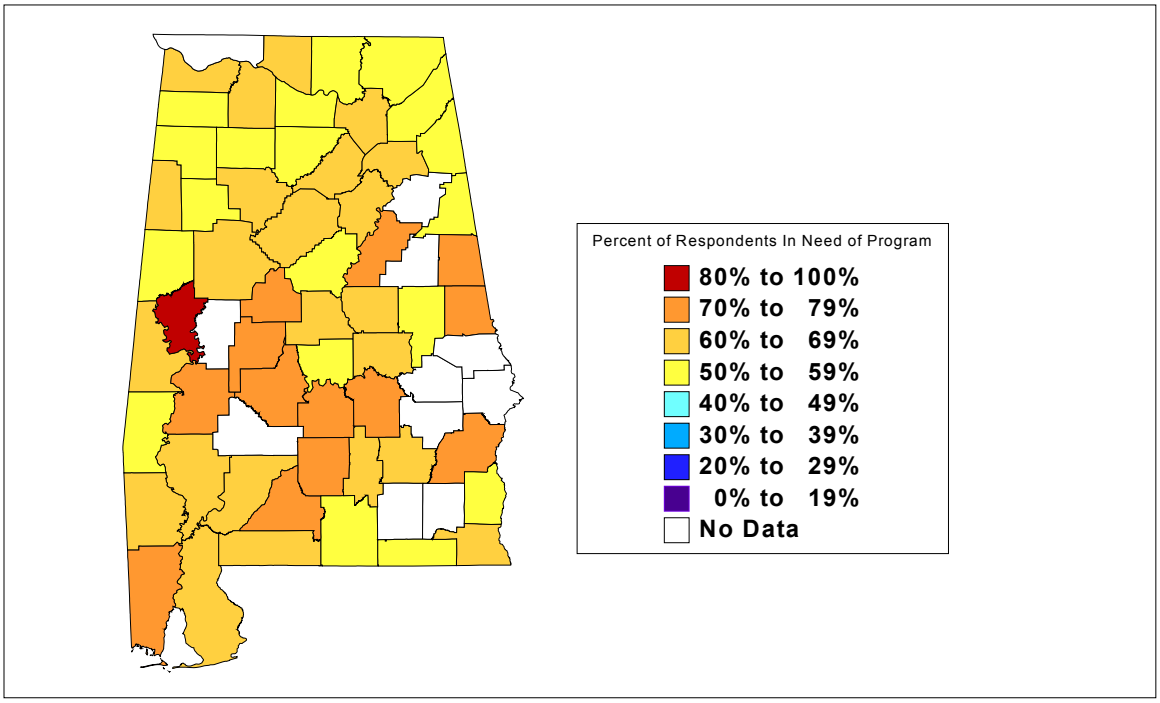

Figure 50. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Positive Action.

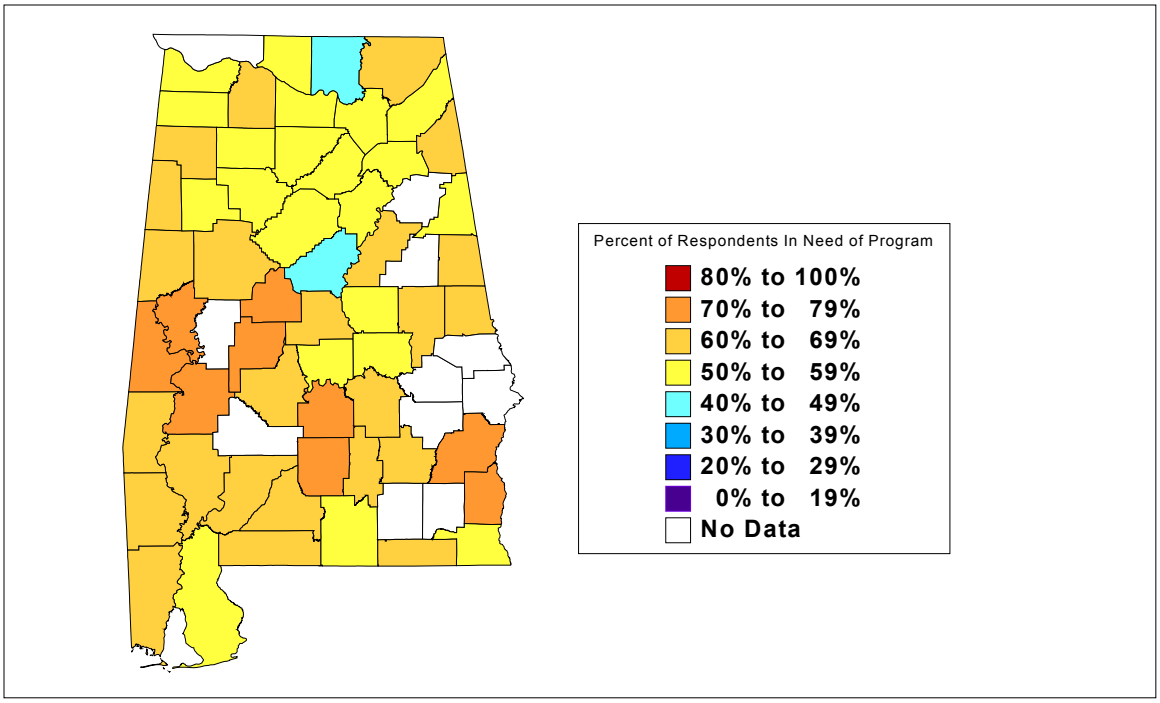

Figure 51. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Project Alert.

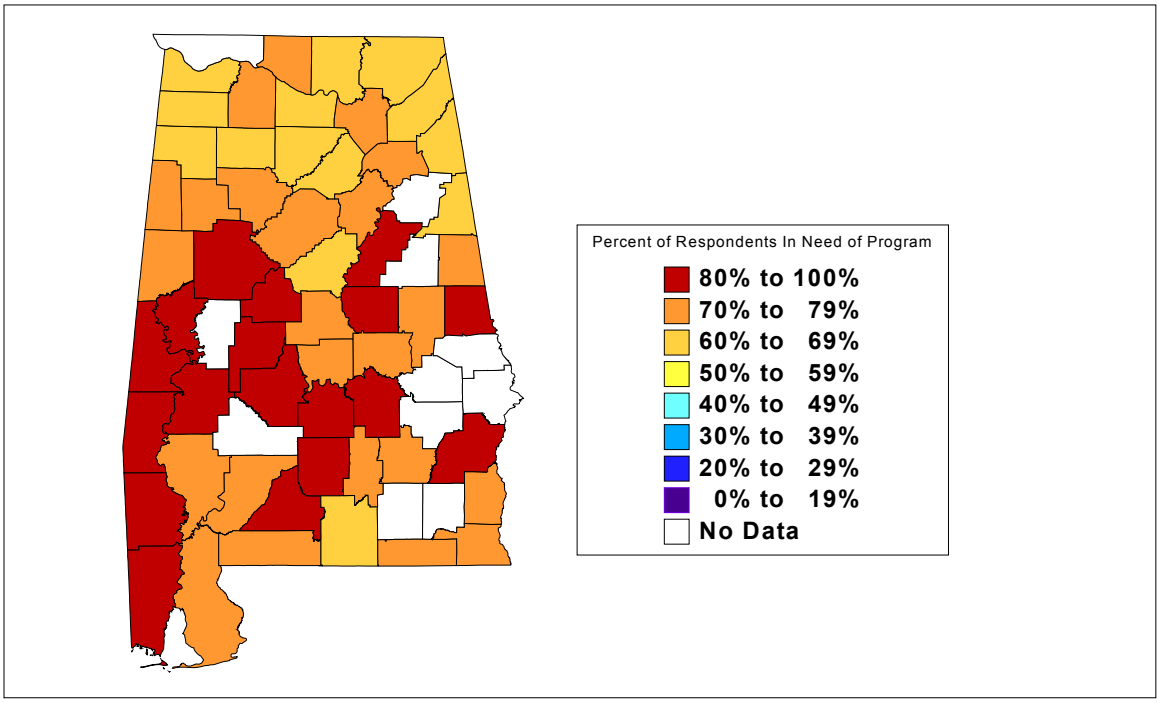

Figure 52. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Project Northland.

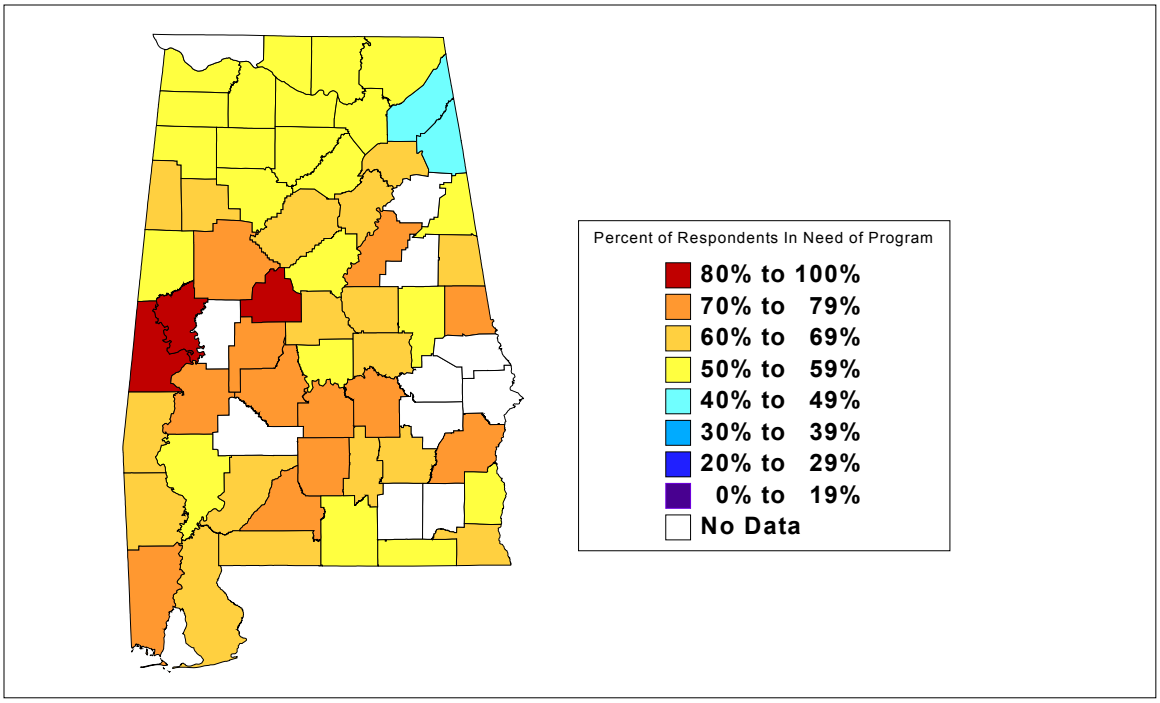

Figure 53. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Project STAR.

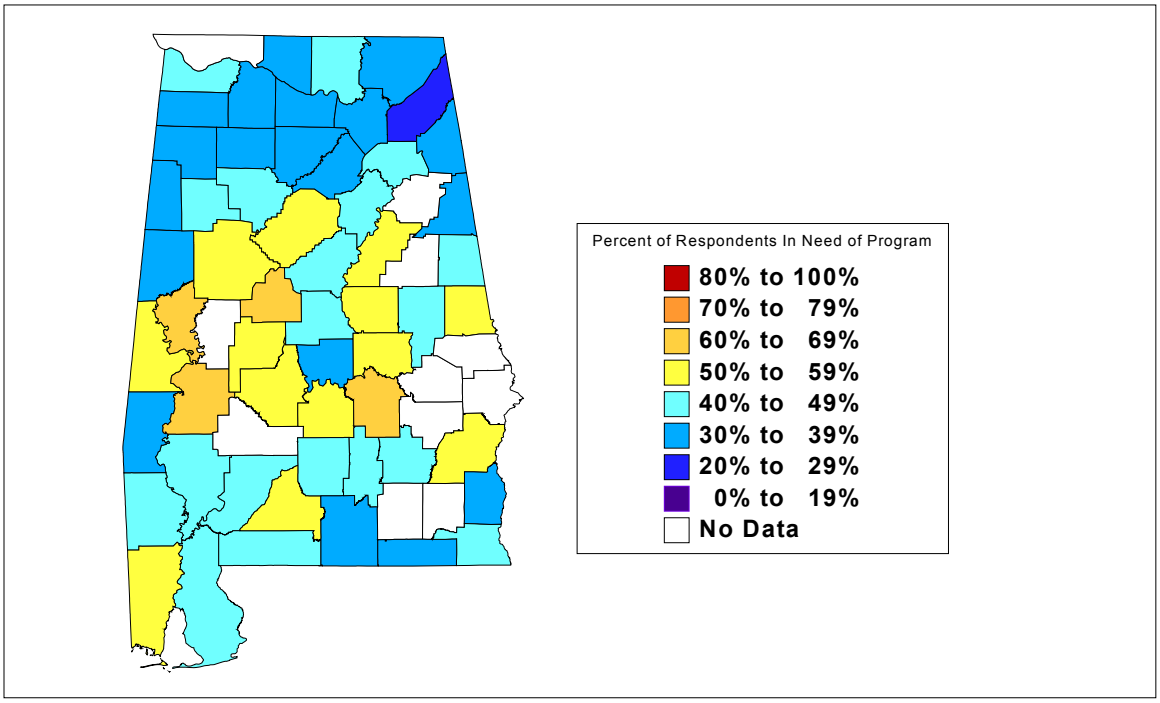

Figure 54. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Project STATUS.

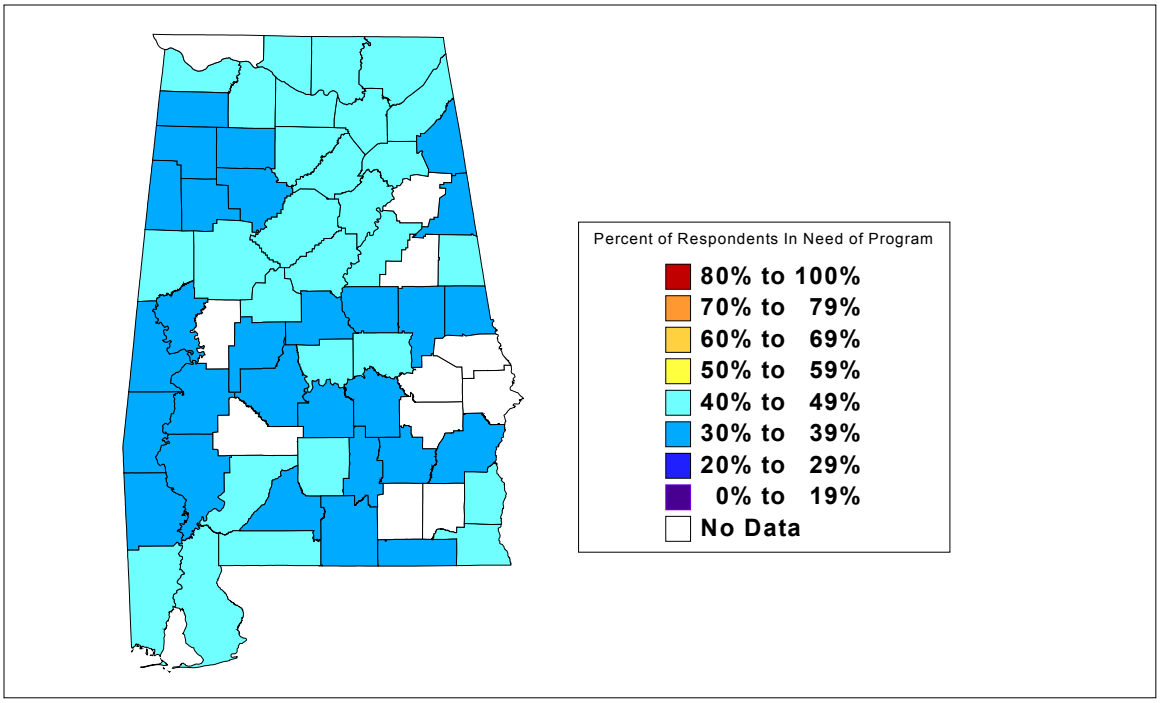

Figure 55. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Project Towards No Drug Abuse.

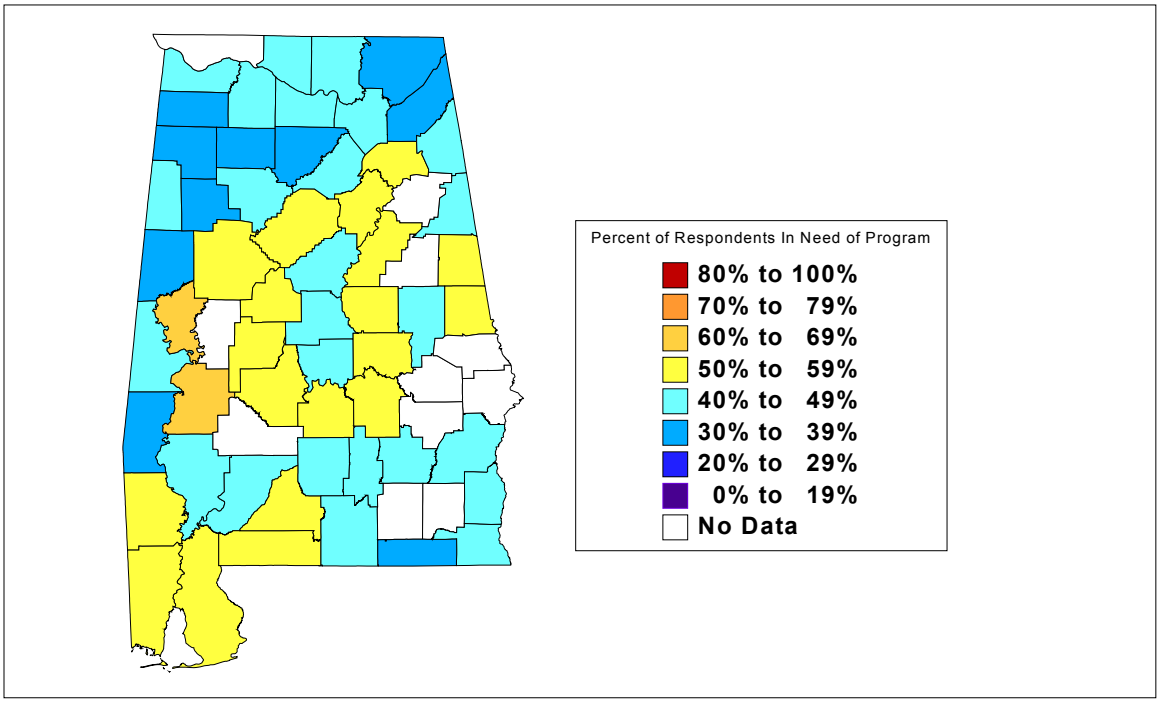

Figure 56. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for SMART leaders.

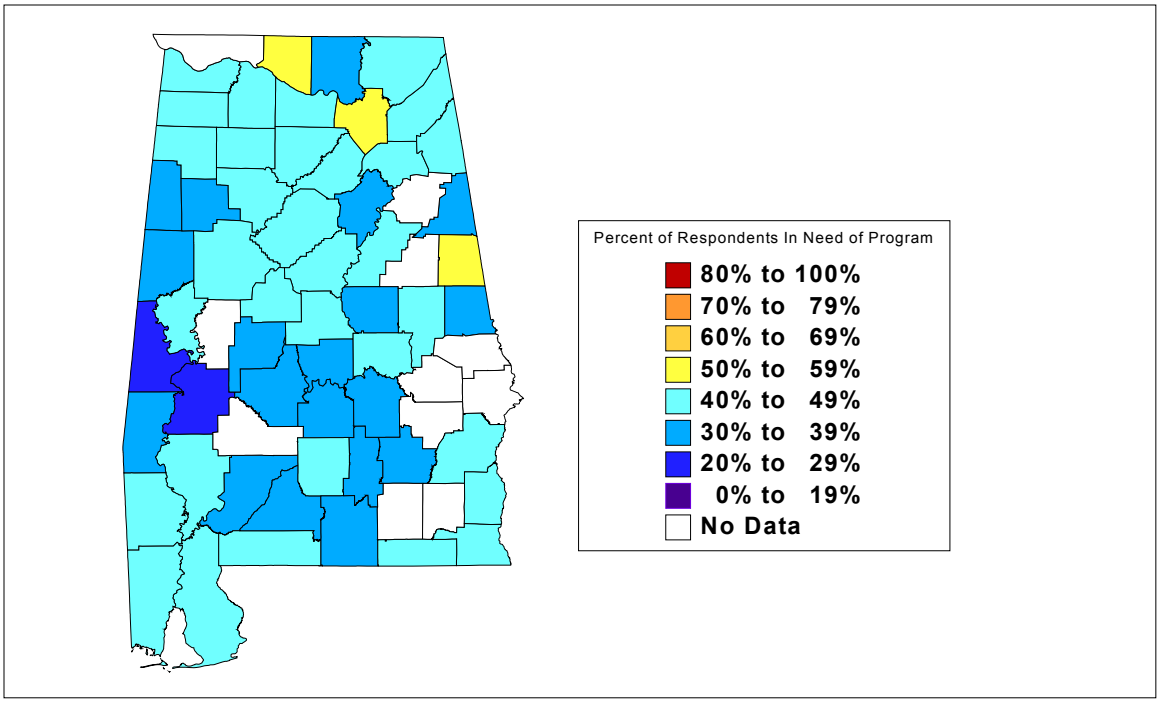

Figure 57. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for Stop Teenage Addiction to Tobacco.

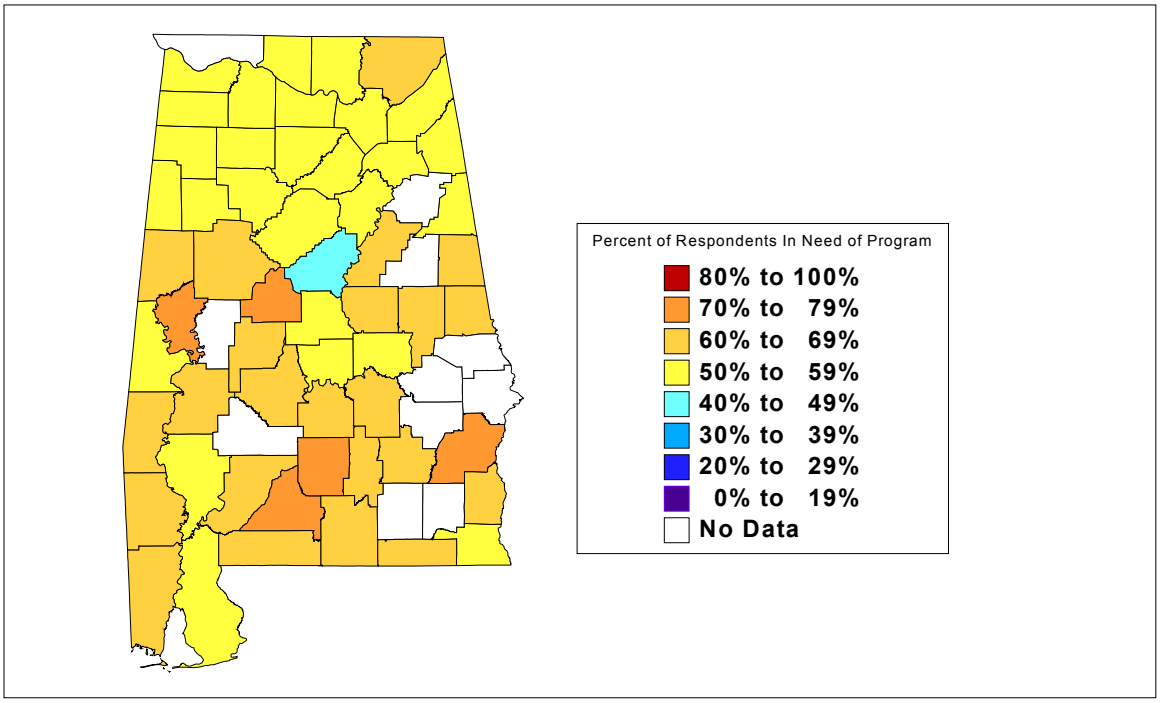

Figure 58. Percentages of respondents in each county who meet the risk factor/outcome cutoff criteria for the Strengthening Families Program.

Findings Particularly Useful to Alabama's Current Planning Process and Prevention Plan

Inhalant use

The pattern of inhalant use among Alabama's adolescents is particularly striking. Analyses of the data revealed a distinct grade-based prevalence configuration for inhalant use. As delineated in the results section, lifetime and past month prevalence rates increased between 6th and 7th grades for male students and generally declined thereafter. By comparison, lifetime inhalant use prevalence rates for female students increased between 6th and 9th grades and subsequently decreased. Female students' past month inhalant use prevalence rates rose between 6th and 8th grades and then declined. Based on these findings, efforts geared toward inhalant use prevention that target students in middle school grades would be of particular interest to Alabama's planners and providers.

Comparison with national data

Alabama's substance use prevalence data were compared with data from other states (Virginia, Florida) and with Monitoring the Future (MTF), a national data set (Table 20). The comparison with MTF data indicated that Alabama's prevalence rates were generally lower than those obtained from the MTF survey. Prevalence rates for cigarette use (in the lower grades) and smokeless tobacco, however, were higher for Alabama than for MTF data, reflecting that the rates of use of these substances among Alabama's adolescent population are greater than the national average. The disparity between Alabama's and MTF's prevalence rate was more pronounced for lifetime than for past month (30-day) data. Even though the actual prevalence rates were generally lower for Alabama than for national data, developmental use patterns were very similar for Alabama and MTF. Typically (although not in the case of inhalants) students in the upper grades reported higher rates of substance use than students in the lower grades.

Given that Alabama's data indicated that State substance use prevalence rates were generally comparable to or slightly lower than those displayed in the national data and that similar developmental patterns emerged, it may be in the State's interest to consider basing its annual budget for prevention programming upon national data, such as the MTF data set, and supplementing these data with data obtained from a State survey every several years. Using national data that are collected regularly (e.g., on a yearly basis, as MTF data are) as a guidepost of substance use prevalence rates among Alabama's adolescents would be informative and economical. The cost of implementing a yearly statewide survey can be daunting; the money that would be saved by conducting a survey every few years could instead be earmarked toward the prevention services that are indicated.

Program need

The maps depicting the need for substance use prevention programs for each county (Figures 43 - 58) demonstrate the diverse nature of program need. Some programs, such as the Leadership and Resiliency Program were recommended for virtually every respondent in each county. Other programs (Project Towards No Drug Abuse, Multi-Component School-Linked Community Approaches, Stop Teenage Addiction to Tobacco) were not recommended as frequently, as the reported need for these programs was not as high.

A geographical pattern analysis of program need did not reveal an overarching and systematic model of need across counties. No counties displayed consistently high or low need for programming, and there were no particular areas of Alabama that always differed from the remainder of the state. This suggests that programming need, which reflects underlying risk/protective factors, is not uniform across the state and should be considered at a local (perhaps county) level when funding allocation plans for particular programs are drawn.

Depending upon the program and the risk factors it addresses, some geographical trends were uncovered, however. The dark orange and red counties in the central (e.g., Bibb, Perry, Dallas) and southwestern (e.g., Mobile, Washington, Escambia) portions of the map depicting need for the Athletes Training and Learning to Avoid Steroids (Figure 44) underscore the pressing need for this program in these areas. A band of dark blue can be observed across the top of the CASASTART map (Figure 45), signifying lower need for this program among counties in northern Alabama (e.g., Franklin, Marion, Jackson, Cullman, DeKalb). Similarly, the Life Skills Training Program map (Figure 48) displayed a dark blue region comprising a number of northern counties (e.g., Jackson, DeKalb, Lawrence) indicating lower need for this program. A pocket of medium (e.g., Lamar, Fayette, Perry, Crenshaw) and dark blue counties (Sumter, Marengo) in the south central and central western portions of the Multi-Component School-Linked Community Approaches map (Figure 49) denotes lower need for the program in these counties, although the general need for this particular program was fairly moderate across Alabama. Maps depicting need for Positive Action (Figure 50) and Project Alert (Figure 51) displayed dark orange bands in the southern central portion of Alabama (e.g., Marengo, Perry, Lowndes, and Butler Counties), highlighting relatively higher need for these programs in these counties.

In some instances, a few counties, or even a single county, demonstrated higher or lower need than other counties for a particular program. For example, Greene, Marengo, Perry, Sumter, Randolph, and Washington counties exhibited a very high need for Athletes Training and Learning to Avoid Steroids (Figure 44), CASASTART (Figure 45), Life Skills Training (Figure 48), Positive Action (Figure 50), and Project STAR (Figure 53) when very few or no other counties showed similar need. By contrast, Shelby County exhibited the lowest need among the counties for Across Ages (Figure 43) and Strengthening Families (Figure 58), which address the same risk factors, and was among the counties that showed the least need for a number of other

programs (e.g., CASASTART, Project Alert). These observations strengthen the assertion that planners should consider the needs of a particular locality when applying for and distributing funding.

Prevention planners and programmers can abstract the information regarding their particular communities from these maps and develop a better sense of what risk/protective factors need to be addressed and, consequently, which programs should be selected. For some risk/protective factors, there are several prevention programs that would be sufficient. When more than one program would target a particular risk/protective factor that a community needs to address, planners and programmers may choose to conduct cost and feasibility analyses to determine which program would be the most efficient.

CONCLUSIONS

KNOWLEDGE GAINED REGARDING ALABAMA'S SUBSTANCE USE NEEDS

Results obtained from the survey addressed several issues regarding the need for substance use prevention services in Alabama. By examining the prevalence of risk and protective factors, planners and programmers can develop a clearer picture of what variables need to be changed or ameliorated in the lives of adolescents in order to prevent substance use. An investigation of the prevalence of delinquent behaviors committed by Alabama's adolescents affords one a closer view of behaviors that may be correlated with, and that may share common underlying factors with, substance use. Finally, the analyses of program recommendations help provide an outline of what concrete steps should be taken to reduce risk factors and boost protective factors in each community. Particularly salient findings are summarized as follows:

Substance Use

- The substances most commonly used by Alabama's adolescents were alcohol, tobacco, and marijuana

- Developmental substance use patterns emerged in most cases showing students in upper grades reported higher prevalence rates of use than students in lower grades

- Prevalence rates of inhalant use exhibited a unique pattern

- Males reported higher prevalence rates of use than females

- Generally, substance use prevalence rates were lower for Alabama's adolescents than for adolescents nationwide; exceptions were observed for cigarettes (in some cases) and chewing tobacco

Prevalence Of Risk And Protective Factors

- Prevalence rates of risk and protective factor scale/substance use outcome combinations were highest for alcohol and tobacco

- "Friends' use of drugs," "favorable attitudes toward drug use," "sensation seeking," "interaction with antisocial peers," "engaging in antisocial behavior," "family history of antisocial behavior," "community laws and norms favorable to drug use," and "perceived availability of drugs and handguns" were risk factors that had particularly strong associations with substance use

- "Perceived risk of drugs" was the only protective factor that had a strong association with substance use (and only with marijuana use)

Prevalence Of Delinquent Behaviors

- Males reported higher prevalence rates than females for all delinquent behavior categories

- Students in upper grades were more likely to report that they had carried a gun, been drunk or high at school, or sold drugs than students in lower grades

Program Need

- The majority of the students in Alabama (at least 80% of respondents in each county) indicated a need for the Leadership and Resiliency Program

- Students would benefit from Project Northland, as 60 to 80% of respondents across counties fulfilled the need criteria for this program

- The need for the Project Towards No Drug Abuse program was relatively low (only 30 to 50% of respondents in counties)

LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE STUDIES

Sampling Methods

This study found that classes with students in several grades are common in Alabama. This occurrence complicated the sampling methods, which were designed for single grade classes. Future researchers in Alabama should design sampling methods that take this feature into account. For example, instead of selecting second period classes, it may be simpler to select classes in a subject that tends to have fewer mixed grade classes.

Scope Of The Study

During the planning phase of this study, there was concern about the size of the sample and the burden on students. In the future, the State may wish to consider reducing the sample size by narrowing the scope of the study rather than risk reducing the precision of the estimates. A reasonable reduction in scope would be to survey a subset of grades. For example, the State could survey grades 6, 8, 10, and 12 in each county. This stratification scheme would reduce the required sample size to approximately 80,000 students. Developmental trends could still be detected, and planners would have a wealth of data on a range of grades. The data would still be useful for grant applications. The authors know of no grant application at the federal or State level that requires applicants to report data for students in every grade.

Response Rates

Obtaining participation from schools posed a significant challenge to this study. There are several steps that the State could take to increase participation in future surveys. One recommendation is to strengthen ties with the Safe and Drug Free Schools coordinators. Several local Safe and Drug Free Schools coordinators were instrumental in securing participation from the schools. In addition, they played a vital role in coordinating survey administration and monitoring the return of completed surveys. Increasing the involvement of other local Safe and Drug Free Schools coordinators would likely be beneficial.

Although outreach for this survey was extensive, additional outreach would have been beneficial. It is recommended that project coordinators attend local meetings with reluctant school systems and increase the frequency of telephone contact with the schools. Outreach to African American communities is especially important, since many of these communities appeared hesitant to participate. These efforts might be most effective if the outreach workers or volunteers had strong ties with these communities. If they have local prevention coalitions, the coordinator could attend meetings in reluctant communities. Prevention coalitions often have school representatives on their boards who can help promote “buy in.”

Incentives are another well-established method of increasing response rates. In this study, the only incentive was allowing schools to keep the pencils provided with the questionnaires. The State received positive feedback about this small gesture, suggesting that additional tokens of appreciation would be well received. In the future, the State may wish to consider using incentives such gift certificates, sporting equipment, school supplies, or raffles among participating schools.

Coordination with schools could also be improved. Preferring to work directly with school authorities, the State designated the principal as the school contact. Principals were difficult to contact and had little time to devote to survey administration. These factors served to increase the difficulty in obtaining completed surveys from the schools. It is recommended that the State ask participating schools to designate a school contact to oversee survey administration.

On a final note, the authors wish to underscore the importance of the project coordinator’s position. The coordinator must understand the Alabama school system and be sensitive to the needs and concerns of key stakeholders. It is also essential that the coordinator be a skillful diplomat, and be adept at handling delicate situations and at obtaining buy-in from a diverse group of stakeholders. Fortunately, Alabama’s coordinator had several of these qualities.

Comparisons With Other States

Given CSAP's worthy goal of comparing substance use and risk and protective factor prevalence data between States, the development of a nationwide, singular system of determining cutoff points for risk and protective factors would be beneficial. Currently, there are several documented methods for establishing cutoff points that have been used by various States. If States use different methods to establish cutoff points and, subsequently, prevalence rates of risk and protection, the comparisons drawn between risk and protective factor prevalence rates from these States will not be meaningful. For example, if a student is deemed "at risk" based upon the cutoff point used by Alabama, he may or may not be "at risk" based upon Maine's cutoff point. It is recommended that CSAP establish a nationwide standard that will avoid this problem.

Relationship Between Scale And Outcome

Analyses of Alabama's data revealed that some scales were better predictors of substance use outcomes than others. Consequently, only those scale/substance use outcome combinations that were deemed informative (i.e., AUROC > 0.7) were subjected to further analyses and interpretation in this report. The relationship between scales and substance use outcomes would take on additional importance if an overall risk index were calculated. While composite risk indices have been computed in the past (e.g., Pollard et al., 1999), they have been unweighted, thus assigning each risk factor equal importance in the formula, even though some risk factors may be better predictors of substance use than others. Composite indices and predictive models that take into consideration the predictive validity of a particular risk or protective factor and that then weight the factor accordingly would augment understanding of the relationship between risk and protective factors and substance use.

Domains And Summary Indices

Hawkins et al. (1992) group risk and protective factors into several domains: 1) Community, 2) School, 3) Family, 4) Peer, and 5) Individual. While these groupings have good face validity, a modified multi-trait multi-method matrix (MMTMM) showed that they did not have good construct validity in Alabama's data. This property is important both theoretically and practically. Theoretically, it is important to demonstrate that these groupings represent divisions along true conceptual borders. Practically, it is important when creating summary measures that are designed to represent these distinct concepts. Summary indices may not be appropriate when the items composing the indices do not correlate, depending on the summary function used.

The findings in this study highlight the importance of validating summary indices prior to their use in a study report. Many scale scores did not serve as good proxies for the outcome measures during the course of cutoff point determination. If the domain scores had been created without first assessing their construct validity, scales predictive of outcome measures would have been averaged with those that were not predictive of outcome measures, adding noise to the measures and greatly reducing their utility.

RECOMMENDATIONS

IMPROVING THE FIT BETWEEN NEED AND RESOURCES

This report is meant to serve as a tool to guide prevention planners and programmers by providing information regarding the prevalence rates of substance use and risk and protective factors for substance use in their own communities. To assess what programs and services are needed in a particular area, planners and programmers should attend especially to the prevalence rates of the risk factor/substance use outcomes and the programs that are recommended to address those risk factor/substance use outcome combinations depicted in the maps (Figures 18 – 42 and Figures 43 – 58, respectively).

Additionally, programmers and planners can use the information provided by the community resource assessment (CRA) and social indicators studies, which were also conducted as part of Alabama's needs assessment. The gap between prevention services that are currently provided and those that are needed, as indicated by the results of the survey, can be narrowed if risk /protective factor indices of need are flagged, suitable programs are chosen, and redundancies in programming are eliminated. A more formal integration of information from the student survey, CRA, and social indicators studies will be provided as part of the contract final report for this project; however, some particularly salient points can be taken from the current analyses of the student survey data and incorporated into recommendations:

- The Leadership and Resiliency Program is strongly recommended in Alabama, since 80 to 100% of respondents in all counties with valid data reported high prevalence rates of risk factor/substance use outcome combinations involving "friends' use of drugs," "favorable attitudes toward drug use," "sensation seeking," or "interaction with antisocial peers."

- Only 30 to 50% of respondents in all counties with valid data indicated a need for Project Toward No Drug Abuse (PNTDA), suggesting that the majority of students were protected against marijuana use by the "perceived risk of drug use" protective factor. This implies that programs that are already in place may help to boost students' perceived risk of drug use so that they will not be as likely to use marijuana. It is therefore recommended that efforts to uphold students' harmful perception of drugs be maintained.

TAILORING PREVENTION SERVICES TO SUIT ALABAMA'S NEEDS

Alabama's current prevention services can be adapted and new programs can be implemented to service the special needs of Alabama's adolescent population. More specifically, selecting programs which target adolescents that are at risk with predominant risk factors, and the most commonly used drugs will go a long way towards improving the health and well-being of Alabama's adolescents. Taken together, the student survey data suggest that programming efforts should seek to decrease the use of substances by reducing the prevalence of particular risk factors such as engaging in antisocial behavior, family history of antisocial behavior, friends' use of drugs, favorable attitudes toward drug use, interaction with antisocial peers, sensation seeking, community laws and norms favorable to drug use, and the perceived availability of drugs and handguns.

As one of the goals of prevention is to delay the onset of substance use, a substantial amount of the programming efforts should be geared towards thwarting the initiation of use by students in the lower grades. A variety of prevention programs, including Across Ages, CASASTART, and Life Skills Training were developed for and tested on students of middle school age and have been demonstrated to reduce substance use in this group of adolescents. Given that substance use prevalence rates were generally higher for older students than for younger ones (except for inhalants), Alabama's prevention efforts would benefit from attending to students in lower grades. Results obtained from the CRA indicate that there are already some programs in place that serve younger students. For example, 44%, 57%, and 43% of Block Grant programs surveyed by the Community Resource Assessment serve elementary school, middle/junior high school, and high school students, respectively. Given limited financial resources, it is recommended that Alabama continue to gear its programming efforts toward younger students, particularly targeting those risk factors that were observed to have higher predictive validity. Additionally, as male students generally exhibited higher prevalence rates of substance use than female students, males would particularly benefit from prevention efforts targeted toward them.

Prevalence rates of risk factor/substance use outcome combinations were consistently higher for alcohol and tobacco than for the other substances (marijuana, inhalants, other drugs). This indicates that the use of these particular substances may be driving the prevalence rates for these risk factor/substance use outcome combinations and should be addressed in programming efforts. In a related manner, the highest substance use prevalence rates were observed for alcohol, cigarettes, and marijuana. Chewing tobacco prevalence rates also were relatively high, but only for male students. While most of the programs included in CSAP's arsenal do not target the use of specific substances, some were developed to reduce the use of particular substances (e.g., Athletes Training and Learning to Avoid Steroids). Although these programs may set out to reduce the rates of specific types of substances, they typically decrease rates of use of other substances as well.

FUTURE STUDIES

Given the lessons learned during the course of the implementation and analysis of this study, the adoption of several measures is recommended to facilitate future data collection efforts:

- Reduce scope of data collection to survey only a few grades (e.g., 6, 8, 10, 12) in each county. This would save time and money and still provide a wealth of data that would be useful to planners.

- Reinforce connections with Safe and Drug Free Schools coordinators and enhance associations with schools. Coordination of survey administration would be improved by strengthening these relationships.

- Increase outreach efforts, particularly within African American communities. To collect data which are truly representative of the State's youth, it is necessary to make all participants feel comfortable with the survey process.

- Introduce incentives to schools for survey participation. To increase response rates, the State may consider employing raffles or offering participating schools inducements such as sports equipment or gift certificates that can be used to enhance educational programming.

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APPENDIX A

SURVEY QUESTIONNAIRE

OMB No. 0930-XXXX
Expires _____

Alabama's Substance Abuse
Risk & Protective Factor
Student Survey

The purpose of this study is to gather information needed to plan important prevention and intervention programs to combat such problems as alcohol and other drug use and violence in our schools and communities. It will also help us to judge the effectiveness of our current prevention and intervention efforts.

Thank you for accepting the invitation to participate in this study. The questions contained in this booklet are designed to obtain your opinion about a number of things concerning you, your friends, your family, your neighborhood and your community. In a sense, many of your answers will count as "votes" on a wide range of important issues.

In order for this study to be helpful, it is important that you answer each question as thoughtfully and honestly as possible. All of your answers will be kept strictly confidential and will never be seen by anyone at your school. You will not be asked for your name. Please do not write your name in the booklet. This study is completely voluntary so you may skip any question that you do not wish to answer.

Be sure to read the instructions below before you begin to answer. Thank you very much for being an important part of this project.

INSTRUCTIONS

1. This is not a test, so there are no right or wrong answers. Your grades will not be affected.
2. All of the questions should be answered by marking one of the answer spaces. If you do not find an answer that fits exactly, use the one that comes closest. If any question does not apply to you, or you are not sure of what it means, just leave it blank.
3. Your answers will be read automatically by a machine called an optical mark reader. Please follow these directions carefully:

- Make heavy black marks inside the ovals.*
- Erase cleanly any answer you wish to change.
- Make no other markings or comments on the survey pages, since they interfere with the automatic reading.
- DO NOT write your name anywhere on this booklet.

This kind of mark will work:
Correct mark

☐ ☐ ☐ ☐ ☐

These kinds of marks will NOT work:
Incorrect marks

☐ ☐ ☐ ☐ ☐

*Note to reviewer: Ovals will be used on the final scantron questionnaires.

SCHOOL LOCATION

The following numbers will be provided to you by the person administering the survey. Please write the numbers in the space provided and then darken the ovals corresponding to those numbers.

SCHOOL	REGION	DISTRICT	COUNTY
☐0☐0☐0☐0☐0☐0	☐0☐0☐0	☐0☐0	☐0☐0
☐1☐1☐1☐1☐1☐1	☐1☐1☐1	☐1☐1	☐1☐1
☐2☐2☐2☐2☐2☐2	☐2☐2☐2	☐2☐2	☐2☐2
☐3☐3☐3☐3☐3☐3	☐3☐3☐3	☐3☐3	☐3☐3
☐4☐4☐4☐4☐4☐4	☐4☐4☐4	☐4☐4	☐4☐4
☐5☐5☐5☐5☐5☐5	☐5☐5☐5	☐5☐5	☐5☐5
☐6☐6☐6☐6☐6 ☐6	☐6☐6☐6	☐6☐6	☐6☐6
☐7☐7☐7☐7☐7☐7	☐7☐7☐7	☐7☐7	☐7☐7
☐8☐8☐8☐8☐8☐8	☐8☐8☐8	☐8☐8	☐8☐8
☐9☐9☐9☐9☐9☐9	☐9☐9☐9	☐9☐9	☐9☐9

1. How old are you?

☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14
☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 or older

2. What grade are you in?

☐ 6th ☐ 7th ☐ 8th ☐ 9th ☐ 10th ☐ 11th ☐ 12th

3. Are you:

☐ Female ☐ Male

4a. Are you Hispanic or Latino?

☐ Yes
☐ No

4b. Which of the following best describes you? (mark one or more)

☐ White
☐ Black/ African American
☐ American Indian/ Alaskan Native
☐ Asian
☐ Native Hawaiian/ Other Pacific Islander

5. Think of where you live most of the time. Which of the following people live there with you? (Choose all that apply.)

☐ Mother ☐ Father ☐ Other adults
☐ Foster mother ☐ Foster father ☐ Sister(s)
☐ Stepmother ☐ Stepfather ☐ Stepsister(s)
☐ Grandmother ☐ Grandfather ☐ Brother(s)
☐ Aunt ☐ Uncle ☐ Stepbrother(s)
☐ Other children

6. How many brothers and sisters, including stepbrothers and stepsisters, do you have that are OLDER than you?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

7. How many brothers and sisters, including stepbrothers, and stepsisters, do you have that are YOUNGER than you?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

8. What is the language you use most often at home?

☐ English ☐ Spanish ☐ Another language

9. What is the Zip code where you live?

☐0	☐0	☐0	☐0	☐0
☐1	☐1	☐1	☐1	☐1
☐2	☐2	☐2	☐2	☐2
☐3	☐3	☐3	☐3	☐3
☐4	☐4	☐4	☐4	☐4
☐5	☐5	☐5	☐5	☐5
☐6	☐6	☐6	☐6	☐6
☐7	☐7	☐7	☐7	☐7
☐8	☐8	☐8	☐8	☐8
☐9	☐9	☐9	☐9	☐9

10. What is the highest level of schooling your father completed?

☐ Completed grade school or less
☐ Some high school
☐ Completed high school
☐ Do not know
☐ Some college
☐ Completed college
☐ Graduate or professional school after college
☐ Does not apply

11. What is the highest level of schooling your mother completed?

☐ Completed grade school or less
☐ Some high school
☐ Completed high school
☐ Do not know
☐ Some college
☐ Completed college
☐ Graduate or professional school after college
☐ Does not apply

12. Where are you living now?

☐ On a farm
☐ In the country, not on a farm
☐ In a city, town, or suburb

13. Putting them all together, what were your grades like last year?

☐ Mostly F's ☐ Mostly D's ☐ Mostly C's ☐ Mostly B's ☐ Mostly A's

14. During the LAST FOUR WEEKS, how many whole days of school have you missed

1. because of illness?
   ☐ None ☐ 2 days ☐ 4-5 days ☐ 11 or more days
   ☐ 1 day ☐ 3 days ☐ 6-10 days

2. because you skipped or "cut"?
   ☐ None ☐ 2 days ☐ 4-5 days ☐ 11 or more days
   ☐ 1 day ☐ 3 days ☐ 6-10 days

3. for other reasons?
   ☐ None ☐ 2 days ☐ 4-5 days ☐ 11 or more days
   ☐ 1 day ☐ 3 days ☐ 6-10 days

	NO!	no	yes	YES!
15. In my school, students have lots of chances to help decide things like class activities and rules.	☐	☐	☐	☐
16. Teachers ask me to work on classroom projects.	☐	☐	☐	☐
17. My teacher(s) notices when I am doing a good job, and lets me know about it.	☐	☐	☐	☐

18.	**There are a lot of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.**	☐	☐	☐	☐
19.	**There are lots of chances for students in my school to talk with a teacher one-on-one.**	☐	☐	☐	☐
20.	**I feel safe at my school.**	☐	☐	☐	☐
21.	**The school lets my parents know when I have done something well.**	☐	☐	☐	☐
22.	**My teachers praise me when I work hard in school.**	☐	☐	☐	☐
23.	**Are your school grades better than the grades of most students in your class?**	☐	☐	☐	☐
24.	**I have lots of chances to be part of class discussions or activities.**	☐	☐	☐	☐

25. How often do you feel that the school work you are assigned is meaningful and important?

☐ Never ☐ Often
☐ Seldom ☐ Almost always
☐ Sometimes

26. How interesting are most of your courses to you?

☐ Very interesting and stimulating ☐ Fairly interesting
☐ Quite interesting ☐ Slightly dull ☐ Very dull

27. How important do you think the things you are learning in school are going to be for your later life?

☐ Very important ☐ Slightly important
☐ Quite important ☐ Not at all important
☐ Fairly important

28. Now thinking back over the past year in school, how often did you?

	Never	Seldom	Some-times	Often	Almost always
a. Enjoy being in school	☐	☐	☐	☐	☐

b. Hate being in school	☐	☐	☐	☐	☐
c. Try to do your best work in school	☐	☐	☐	☐	☐

Peer Influences

29. Think of your <u>four best friends</u> (the friends you feel closest to), in the past year (12 months), how many of your best friends have:

	None	1	2	3	4
a. smoked cigarettes?	☐	☐	☐	☐	☐
b. tried beer, wine, or hard liquor (for example, vodka, whiskey, or gin) when their parents didn't know about it?	☐	☐	☐	☐	☐
c. used marijuana?	☐	☐	☐	☐	☐
d. used LSD, cocaine, amphetamines, or other drugs?	☐	☐	☐	☐	☐
e. been suspended from school?	☐	☐	☐	☐	☐
f. carried a handgun?	☐	☐	☐	☐	☐
g. sold drugs?	☐	☐	☐	☐	☐
h. stolen or tried to steal a motor vehicle such as a car or a motorcycle?	☐	☐	☐	☐	☐
i. been arrested?	☐	☐	☐	☐	☐
j. dropped out of school?	☐	☐	☐	☐	☐
k. been members of a gang?	☐	☐	☐	☐	☐

30. How old were you when you first:

	Never have	10 or younger	11	12	13	14	15	16	17 or older
a. smoked marijuana?	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. smoked a cigarette, even just a puff?	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. had more than a sip or two of beer, wine, or hard liquor (for example, vodka, whiskey, or gin)?	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Never have	10 or younger	11	12	13	14	15	16	17 or older
d. began drinking alcoholic beverages regularly, that is, at least once or twice a month?	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. got suspended from school?	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. got arrested?	☐	☐	☐	☐	☐	☐	☐	☐	☐
g. carried a handgun?	☐	☐	☐	☐	☐	☐	☐	☐	☐
h. attacked someone with the idea of seriously hurting them?	☐	☐	☐	☐	☐	☐	☐	☐	☐
i. belonged to a gang?	☐	☐	☐	☐	☐	☐	☐	☐	☐

31. How wrong do you think it is for someone your age to:

	Very wrong	Wrong	A little bit wrong	Not wrong at all
a. take a handgun to school?	☐	☐	☐	☐
b. steal anything worth more than $5.00?	☐	☐	☐	☐
c. pick a fight with someone?	☐	☐	☐	☐
d. attack someone with the idea of seriously hurting them?	☐	☐	☐	☐
e. stay away from school all day when their parents think they are at school?	☐	☐	☐	☐
f. drink beer, wine, or hard liquor (for example: vodka, whiskey, or gin) regularly?	☐	☐	☐	☐
g. smoke cigarettes?	☐	☐	☐	☐
h. smoke marijuana?	☐	☐	☐	☐
i. use LSD, cocaine, amphetamines, or another illegal drug?	☐	☐	☐	☐

32. I ignore rules that get in my way.

☐ Very false ☐ Somewhat true
☐ Somewhat false ☐ Very true

33. It is all right to beat up people if they start the fight.

☐NO! ☐no ☐yes ☐YES!

34. It is important to be honest with your parents, even if they become upset or you get punished.

☐NO! ☐no ☐yes ☐YES!

35. I do the opposite of what people tell me, just to get them mad.

☐ Very false ☐ Somewhat true
☐ Somewhat false ☐ Very true

36. I think it is okay to take something without asking if you can get away with it.

☐ NO! ☐ no ☐ yes ☐ YES!

37. How many times have you done the following things?

	Never	I've done it, but not in the past year	Less than once a month	About once a month	2 or 3 times a month	Once a week or more
a. Done what feels good, no matter what	☐	☐	☐	☐	☐	☐
b. Done something dangerous because someone dared you to do it	☐	☐	☐	☐	☐	☐
c. Done crazy things, even if they are a little dangerous	☐	☐	☐	☐	☐	☐

38. Have you ever belonged to a gang? ☐ Yes ☐ No

39. If you have ever belonged to a gang, did the gang have a name?

☐ Yes ☐ No ☐ I never have belonged to a gang

40. How many times in the past year (the last 12 months) have you:

	Never	1 to 2 times	3 to 5 times	6 to 9 times	10 to 19 times	20 to 29 times	30 to 39 times	40+ times
a. been suspended from school?	☐	☐	☐	☐	☐	☐	☐	☐

	Never	1 to 2 times	3 to 5 times	6 to 9 times	10 to 19 times	20 to 29 times	30 to 39 times	40+ times
b. carried a handgun?	☐	☐	☐	☐	☐	☐	☐	☐
c. sold drugs?	☐	☐	☐	☐	☐	☐	☐	☐
d. stolen or tried to steal a motor vehicle such as a car or a motorcycle?	☐	☐	☐	☐	☐	☐	☐	☐
e. been arrested?	☐	☐	☐	☐	☐	☐	☐	☐
f. attacked someone with the idea of seriously hurting them?	☐	☐	☐	☐	☐	☐	☐	☐
g. been drunk or high at school?	☐	☐	☐	☐	☐	☐	☐	☐
h. taken a handgun to school?	☐	☐	☐	☐	☐	☐	☐	☐

41. What are the chances you would be seen as cool if you:

	None or very little chance	Little chance	Some chance	Pretty good chance	Very good chance
a. smoked cigarettes?	☐	☐	☐	☐	☐
b. began drinking alcoholic beverages regularly, that is, at least once or twice a month?	☐	☐	☐	☐	☐
c. smoked marijuana?	☐	☐	☐	☐	☐
d. carried a handgun?	☐	☐	☐	☐	☐

42. You are looking at CD's in the music store with a friend. You look up and see her slip a CD under her coat. She smiles and says, "Which one do you want? Go ahead, take it while nobody's around." There is no one in sight, no employees or other customers. What would you do now?

☐ Ignore her
☐ Grab a CD and leave the store
☐ Tell her to put the CD back
☐ Act like it is a joke, and ask her to put the CD back

43. It is 8:00 on a weeknight and you are about to go over to a friend's house when your mother asks you where you are going. You say, "Oh, just going to go hang out with some friends." She says, "No, you'll just get into trouble if you go out. Stay home tonight." What would you do now?

☐ Leave the house anyway
☐ Explain what you are going to do with your friends, tell her when you will get home, and ask if you can go out
☐ Not say anything and start watching TV
☐ Get into an argument with her

44. You are visiting another part of town, and you do not know any of the people your age there. You are walking down the street, and some teenager you do not know is walking toward you. He is about your size, and as he is about to pass you, he deliberately bumps into you and you almost lose your balance. What would you say or do?

☐ Push the person back
☐ Say "Excuse me" and keep on walking
☐ Say "Watch where you're going" and keep walking
☐ Swear at the person and walk away

45. You are at a party at someone's house, and one of your friends offers you a drink containing alcohol. What would you say or do?

☐ Drink it
☐ Tell you friend, "No thanks, I don't drink" and suggest that you go and do something else
☐ Just say, "No thanks' and walk away
☐ Make up a good excuse, tell your friend you had something else to do, and leave

46. I think sometimes it is okay to cheat at school.

☐ NO! ☐ no ☐ yes ☐ YES!

47. I like to see how much I can get away with.

☐ Very false ☐ Somewhat true
☐ Somewhat false ☐ Very true

	NO!	no	yes	YES!
48. It is important to think before you act.	☐	☐	☐	☐
49. Do you have to have everything right away?	☐	☐	☐	☐
50. Do you often switch from activity to activity rather than sticking to one thing at a time?	☐	☐	☐	☐
51. I often do things without thinking about what will happen.	☐	☐	☐	☐

52. How much do you think people risk harming themselves (physically or in other ways) if they:

	No risk	Slight risk	Moderate risk	Great risk
a. smoke one or more packs of cigarettes per day?	☐	☐	☐	☐
b. try marijuana once or twice?	☐	☐	☐	☐
c. smoke marijuana regularly?	☐	☐	☐	☐
d. take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?	☐	☐	☐	☐

53. How often do you attend religious services or activities?

☐ Never
☐ Rarely
☐ 1-2 times a month
☐ About once a week or more

	NO!	no	yes	YES!
54. Sometimes I think that life is not worth it.	☐	☐	☐	☐
55. At times I think I am no good at all.	☐	☐	☐	☐
56. All in all, I am inclined to think that I am a failure.	☐	☐	☐	☐
57. In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes?	☐	☐	☐	☐

Drug/Alcohol Usage

58. Have you ever used smokeless tobacco (chew, snuff, plug, dipping tobacco, or chewing tobacco)?

☐ Never
☐ Once or twice
☐ Once in a while but not regularly
☐ Regularly in the past
☐ Regularly now

59. How frequently have you used smokeless tobacco during the past 30 days?

☐ Never
☐ Once or twice
☐ Once in a while but not regularly
☐ Regularly in the past
☐ Regularly now

60. Have you ever smoked cigarettes?

☐ Never
☐ Once or twice
☐ Once in a while but not regularly
☐ Regularly in the past
☐ Regularly now

61. How frequently have you smoked cigarettes during the past 30 days?

☐ Not at all
☐ Less than one cigarette per day
☐ One to five cigarettes per day
☐ About one-half pack per day
☐ About one pack per day
☐ About one and one-half packs per day
☐ Two packs or more per day

62. On how many occasions (if any) have you had beer, wine, or hard liquor to drink in your lifetime? (More than just a few sips.)

☐ 0 - occasions
☐ 1 - 2 occasions
☐ 3 - 5 occasions
☐ 6 - 9 occasions
☐ 10 - 19 occasions
☐ 20 - 39 occasions
☐ 40 or more occasions

63. On how many occasions (if any) have you had beer, wine, or hard liquor during the past 30 days?

☐ 0 - occasions
☐ 1 - 2 occasions
☐ 3 - 5 occasions
☐ 6 - 9 occasions
☐ 10 - 19 occasions
☐ 20 - 39 occasions
☐ 40 or more occasions

64. Think back over the last two weeks. On how many days did you have five or more alcoholic drinks at the same time or within a couple of hours of each other?

☐ 0 - occasions
☐ 1 - 2 occasions
☐ 3 - 5 occasions
☐ 6 - 9 occasions
☐ 10 - 19 occasions
☐ 20 - 39 occasions
☐ 40 or more occasions

65. On how many occasions (if any) have you used marijuana in your lifetime?

☐ 0 - occasions
☐ 1 - 2 occasions
☐ 3 - 5 occasions
☐ 6 - 9 occasions
☐ 10 - 19 occasions
☐ 20 - 39 occasions
☐ 40 or more occasions

66. On how many occasions (if any) have you used marijuana during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

67. On how many occasions (if any) have you used LSD or other psychedelics in your lifetime?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

68. On how many occasions (if any) have you used LSD or other psychedelics during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

69. On how many occasions (if any) have you used cocaine or crack in your lifetime?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

70. On how many occasions (if any) have you used cocaine or crack during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

71. On how many occasions (if any) have you sniffed glue, breathed the contents of an aerosol spray can, or inhaled other gases or sprays in order to get high in your lifetime?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

72. On how many occasions (if any) have you sniffed glue, breathed the contents of an aerosol spray can, or inhaled other gases or sprays in order to get high during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

73. On how many occasions (if any) have you used derbisol in your lifetime?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

74. On how many occasions (if any) have you used derbisol during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

75. On how many occasions (if any) have you used other drugs in your lifetime?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

76. On how many occasions (if any) have you used other drugs during the past 30 days?

- ☐ 0 - occasions
- ☐ 1 - 2 occasions
- ☐ 3 - 5 occasions
- ☐ 6 - 9 occasions
- ☐ 10 - 19 occasions
- ☐ 20 - 39 occasions
- ☐ 40 or more occasions

Community-Based Perceptions

77. If you wanted to get some beer, wine, or hard liquor (for example, vodka, whiskey, or gin), how easy would it be for you to get some?

- ☐ Very hard
- ☐ Sort of hard
- ☐ Sort of easy
- ☐ Very easy

78. If you wanted to get some cigarettes, how easy would it be for you to get some?

☐ Very hard ☐ Sort of easy
☐ Sort of hard ☐ Very easy

79. If a kid smoked marijuana in your neighborhood, would he or she be caught by the police?

☐ NO! ☐ no ☐ yes ☐ YES!

80. If you wanted to get drugs like cocaine, LSD, or amphetamines, how easy would it be for you to get some?

☐ Very hard ☐ Sort of easy
☐ Sort of hard ☐ Very easy

81. If a kid drank some beer, wine, or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, would he or she be caught by the police?

☐ NO! ☐ no ☐ yes ☐ YES!

82. If you wanted to get a handgun, how easy would it be for you to get one?

☐ Very hard ☐ Sort of easy
☐ Sort of hard ☐ Very easy

83. If a kid illegally carried a handgun in your neighborhood, would he or she be caught by the police?

☐ NO! ☐ no ☐ yes ☐ YES!

84. If you wanted to get some marijuana, how easy would it be for you to get some?

☐ Very hard ☐ Sort of easy
☐ Sort of hard ☐ Very easy

85. If a kid smoked cigarettes in your neighborhood, would he or she be caught by the police?

☐ NO! ☐ no ☐ yes ☐ YES!

86. How wrong would most adults in your neighborhood, think it is for kids your age:

	Very wrong	Wrong	A little bit wrong	Not wrong at all
a. to use marijuana?	☐	☐	☐	☐
b. to drink alcohol?	☐	☐	☐	☐

c. to smoke cigarettes?	☐	☐	☐	☐

87. About how many adults have you known personally who in the past year have:

1. used marijuana, crack, cocaine, or other drugs?

☐ None ☐ 1 adult ☐ 2 adults ☐ 3 or 4 adults ☐ 5 or more adults

2. sold or dealt drugs?

☐ None ☐ 1 adult ☐ 2 adults ☐ 3 or 4 adults ☐ 5 or more adults

3. done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.?

☐ None ☐ 1 adult ☐ 2 adults ☐ 3 or 4 adults ☐ 5 or more adults

4. gotten drunk or high?

☐ None ☐ 1 adult ☐ 2 adults ☐ 3 or 4 adults ☐ 5 or more adults

	NO!	no	yes	YES!
88. If I had to move, I would miss the neighborhood I now live in.	☐	☐	☐	☐
89. My neighbors notice when I am doing a good job and let me know about it.	☐	☐	☐	☐
90. I like my neighborhood.	☐	☐	☐	☐
91. There are a lot of adults in my neighborhood I could talk to about something important.	☐	☐	☐	☐

92. How much do each of the following statements describe your neighborhood?

	NO!	no	yes	YES!
a. Crime and/or drug selling	☐	☐	☐	☐
b. Fights	☐	☐	☐	☐

	NO!	no	yes	YES!
c. Lots of empty or abandoned buildings	☐	☐	☐	☐
d. Lots of graffiti	☐	☐	☐	☐

93. People move in and out of my neighborhood a lot.

☐ NO! ☐ no ☐ yes ☐ YES!

94. How many times have you changed homes since kindergarten?

☐ Never ☐ 3 - 4 times ☐ 7 or more times
☐ 1 - 2 times ☐ 5 - 6 times

95. There are people in my neighborhood, who are proud of me when I do something well.

☐ NO! ☐ no ☐ yes ☐ YES!

96. Which of the following activities for people your age are available in your community?

1. Sports teams	☐ Yes	☐ No
2. scouting	☐ Yes	☐ No
3. Boy and girls clubs	☐ Yes	☐ No
4. 4-H clubs	☐ Yes	☐ No
5. Service clubs	☐ Yes	☐ No

97. Have you changed schools in the past year (the last 12 months)?

☐ No ☐ Yes

98. I feel safe in my neighborhood.

☐ NO! ☐ no ☐ yes ☐ YES!

99. How many times have you changed schools since kindergarten?

☐ Never ☐ 3 - 4 times ☐ 7 or more times
☐ 1 - 2 times ☐ 5 - 6 times

100. I would like to get out of my neighborhood.

☐ NO! ☐ no ☐ yes ☐ YES!

101. Have you changed homes in the past year (the last 12 months)?

☐ No ☐ Yes

102. There are people in my neighborhood, who encourage me to do my best.

☐ NO! ☐ no ☐ yes ☐ YES!

THE NEXT FEW QUESTIONS ASK ABOUT YOUR FAMILY. For the following questions, if you consider more than one person your "father" or "mother" (e.g. a step-parent or foster parent), please answer these questions thinking of the father or mother you currently live with MOST of the time.

102. Has anyone in your family ever had a severe alcohol or drug problem?

☐ No ☐ Yes

104. Have any of your brothers or sisters ever:

	No	Yes	I Don't Have any Brothers or Sisters
a. drunk beer, wine, or hard liquor (for example, vodka, whiskey or gin)?	☐	☐	☐
b. smoked marijuana?	☐	☐	☐
c. smoked cigarettes?	☐	☐	☐
d. taken a handgun to school?	☐	☐	☐
e. been suspended or expelled from school?	☐	☐	☐

105. How wrong do your parents feel it would be for you to:

	Very wrong	Wrong	A little bit wrong	Not wrong at all
a. drink beer, wine, or hard liquor (for example, vodka, whiskey, or gin) regularly (at least once or twice a month)?	☐	☐	☐	☐
b. smoke cigarettes?	☐	☐	☐	☐
c. smoke marijuana?	☐	☐	☐	☐
d. steal anything worth more than $5.00?	☐	☐	☐	☐
e. draw graffiti, write things, or draw pictures on buildings or other property (without the owner's permission)?	☐	☐	☐	☐

f. pick a fight with someone?

☐	☐	☐	☐

106. The rules in my family are clear.

☐ NO! ☐ no ☐ yes ☐ YES!

	NO!	no	yes	YES!
107. When I am not at home, one of my parents knows where I am and who I am with.	☐	☐	☐	☐
108. My parents want me to call if I am going to be late getting home.	☐	☐	☐	☐
109. If you drank some beer, wine, or hard liquor (for example, vodka, whiskey, or gin) without your parents' permission, would you be caught by your parents?	☐	☐	☐	☐
110. My family has clear rules about alcohol and drug use.	☐	☐	☐	☐
111. If you carried a handgun without your parents' permission, would you be caught by your parents?	☐	☐	☐	☐
112. If you skipped school would you be caught by your parents?	☐	☐	☐	☐

113. My parents notice when I am doing a good job and let me know about it.

☐ Never or almost never ☐ Often
☐ Sometimes ☐ All the time

	NO!	no	yes	YES!
114. My parents ask me what I think before most family decisions affecting me are made.	☐	☐	☐	☐
115. Do you feel very close to your mother?	☐	☐	☐	☐
116. Do you enjoy spending time with your mother?	☐	☐	☐	☐
117. Do you share your thoughts and feelings with your mother?	☐	☐	☐	☐
118. Do you feel very close to your father?	☐	☐	☐	☐
119. Do you enjoy spending time with your father?	☐	☐	☐	☐
120. Do you share your thoughts and feelings with your father?	☐	☐	☐	☐
121. If I had a personal problem, I could ask my mom or dad for help.	☐	☐	☐	☐

☐	☐	☐	☐
☐	☐	☐	☐
☐	☐	☐	☐

122. My parents give me lots of chances to do fun things with them.

123. My parents ask if I have gotten my homework done.

124. Would your parents know if you did not come home on time?

125. People in my family often insult or yell at each other.

☐ NO! ☐ no ☐ yes ☐ YES!

126. People in my family have serious arguments.

☐ NO! ☐ no ☐ yes ☐ YES!

127. We argue about the same things in my family over and over.

☐ NO! ☐ no ☐ yes ☐ YES!

128. How often do your parents tell you that they are proud of you for something you have done?

☐ Never or almost never ☐ Often
☐ Sometimes ☐ All the time

129. How important were the questions in this survey?

☐ Not too important ☐ Important
☐ Fairly important ☐ Very important

130. How honest were you in filling out this survey?

☐ I was very honest
☐ I was honest pretty much of the time
☐ I was honest some of the time
☐ I was honest once in a while
☐ I was not honest at all

APPENDIX B

SURVEY VARIABLES AND CATEGORIES OF QUESTIONS

APPENDIX B. SURVEY VARIABLE DESCRIPTION

Table B-1. Survey Variables and Question Categories

Variables	Category of Questions
Age, grade, gender, race/ethnicity, household structure, siblings, primary language, father's education, mother's education, type of residence	Demographics
Attachment to neighborhood Level of community organization Transitions and mobility Laws and norms regarding drug use Availability of drugs and handguns Opportunities for prosocial involvement Rewards for prosocial involvement	Community-related
Family management Family discipline Family conflict Family history of antisocial behavior Family attitudes toward drug use Family attitudes toward antisocial behavior Attachment to parents Opportunities for prosocial involvement Rewards for prosocial involvement	Family-related
Academic failure Level of commitment to school Opportunities for prosocial involvement Rewards for prosocial involvement	School-related
Rebelliousness Impulsivity Engaging in antisocial/problem behaviors Early initiation of antisocial/problem behaviors Favorable attitudes toward antisocial behavior Favorable attitudes toward drug use Perceived risks of drug use Sensation-seeking/risk-taking Religiosity Belief in the moral order Social skills Depression	Individual behavior/perception-related
Friends' use of drugs Rewards for antisocial involvement Interaction with antisocial peers Gang involvement	Peer-related
Drug use during the past 30 days (last month use) Drug use during lifetime	Self-report of ATOD use
Within the past 12 months: Suspended from school Carried a handgun Sold drugs Stole/tried to steal motor vehicle Arrested Attacked someone with the intent to harm Drunk or high at school Brought handgun to school	Self-report of antisocial/delinquent behaviors

APPENDIX C

INTER-ITEM CORRELATIONS

Appendix C. Inter-Item Correlations

Table C-1. Correlations Within and Between Scales

	CLNA	CCD	CTM	CLFD	CPAD	COPI	CRPI	FPFM	FPD	FFC	FHAB
CLNA											
CCD	0.31										
CTM	0.20	0.25									
CLFD	0.20	0.40	0.18								
CPAD	0.14	0.23	0.10	0.59							
COPI	-0.23	-0.20	-0.12	-0.24	-0.10						
CRPI	-0.45	-0.18	-0.15	-0.25	-0.21	0.29					
FPFM	0.26	0.30	0.15	0.39	0.36	-0.19	-0.32				
FPD	0.20	0.23	0.12	0.49	0.52	-0.19	-0.28	0.61			
FFC	0.21	0.30	0.22	0.33	0.25	-0.14	-0.20	0.32	0.26		
FHAB	0.15	0.25	0.19	0.48	0.40	-0.16	-0.18	0.28	0.33	0.33	
FFDU	0.10	0.23	0.17	0.47	0.39	-0.11	-0.14	0.39	0.34	0.22	0.32
FFAB	0.10	0.31	0.17	0.39	0.30	-0.12	-0.16	0.40	0.31	0.25	0.27
FATT	-0.29	-0.22	-0.15	-0.31	-0.25	0.23	0.33	-0.52	-0.40	-0.36	-0.23
FOPI	-0.29	-0.24	-0.12	-0.32	-0.28	0.24	0.37	-0.62	-0.44	-0.40	-0.24
FRPI	-0.30	-0.25	-0.15	-0.32	-0.28	0.23	0.38	-0.61	-0.44	-0.40	-0.25
SAF	0.12	0.19	0.17	0.21	0.18	-0.19	-0.14	0.22	0.21	0.16	0.23
SCLS	0.20	0.22	0.14	0.37	0.40	-0.19	-0.30	0.41	0.39	0.26	0.26
SOPI	-0.19	-0.16	-0.08	-0.25	-0.23	0.24	0.27	-0.33	-0.26	-0.16	-0.14
SRPI	-0.21	-0.18	-0.10	-0.32	-0.30	0.24	0.35	-0.32	-0.30	-0.20	-0.19
IREB	0.16	0.27	0.17	0.42	0.40	-0.16	-0.20	0.38	0.40	0.35	0.30
IEPB	0.14	0.32	0.26	0.56	0.49	-0.20	-0.19	0.37	0.44	0.29	0.49
IASB	0.07	0.32	0.22	0.40	0.32	-0.12	-0.09	0.30	0.28	0.19	0.28
IFAB	0.14	0.28	0.17	0.46	0.43	-0.18	-0.23	0.41	0.42	0.28	0.31
IFDU	0.14	0.24	0.14	0.54	0.55	-0.15	-0.23	0.41	0.47	0.25	0.39
IPRD	-0.14	-0.20	-0.13	-0.33	-0.32	0.14	0.16	-0.37	-0.39	-0.16	-0.24
IIAP	0.11	0.33	0.22	0.43	0.35	-0.16	-0.12	0.30	0.31	0.21	0.32
IFUD	0.12	0.20	0.14	0.53	0.57	-0.12	-0.19	0.35	0.44	0.23	0.42
ISEN	0.08	0.19	0.13	0.41	0.46	-0.08	-0.16	0.30	0.37	0.24	0.30
IRAI	0.07	0.20	0.11	0.35	0.35	-0.09	-0.12	0.20	0.25	0.18	0.23
IREL	-0.14	-0.14	-0.14	-0.16	-0.09	0.15	0.16	-0.23	-0.18	-0.13	-0.15
IBMO	-0.19	-0.29	-0.15	-0.49	-0.48	0.22	0.27	-0.47	-0.51	-0.33	-0.34
IDEP	0.19	0.23	0.18	0.22	0.17	-0.15	-0.17	0.20	0.14	0.37	0.21
IGAN	0.06	0.28	0.20	0.32	0.25	-0.12	-0.06	0.23	0.24	0.15	0.23

Appendix C. Inter-Item Correlations

Table C-1. Correlations Within and Between Scales

	FFDU	FFAB	FATT	FOPI	FRPI	SAF	SLCS	SOP	SRPI	IREB	IEPB
CLNA											
CCD											
CTM											
CLFD											
CPAD											
COPI											
CRPI											
FPFM											
FPD											
FFC											
FHAB											
FFDU											
FFAB	0.62										
FATT	-0.18	-0.19									
FOPI	-0.21	-0.24	0.72								
FRPI	-0.24	-0.26	0.76	0.75							
SAF	0.19	0.19	-0.19	-0.20	-0.24						
SCLS	0.32	0.31	-0.30	-0.36	-0.39	0.37					
SOPI	-0.18	-0.19	0.27	0.34	0.32	-0.18	-0.46				
SRPI	-0.19	-0.20	0.31	0.36	0.37	-0.22	-0.48	0.58			
IREB	0.31	0.36	-0.31	-0.32	-0.32	0.25	0.45	-0.24	-0.28		
IEPB	0.45	0.40	-0.27	-0.29	-0.29	0.33	0.42	-0.24	-0.29	0.47	
IASB	0.39	0.40	-0.17	-0.20	-0.21	0.22	0.37	-0.24	-0.21	0.35	0.56
IFAB	0.40	0.51	-0.28	-0.32	-0.33	0.24	0.49	-0.31	-0.33	0.53	0.54
IFDU	0.52	0.41	-0.28	-0.31	-0.33	0.26	0.46	-0.27	-0.30	0.47	0.61
IPRD	-0.34	-0.29	0.22	0.24	0.27	-0.26	-0.31	0.18	0.17	-0.31	-0.40
IIAP	0.34	0.34	-0.20	-0.22	-0.22	0.27	0.37	-0.23	-0.25	0.36	0.58
IFUD	0.43	0.31	-0.26	-0.28	-0.29	0.26	0.42	-0.24	-0.28	0.39	0.61
ISEN	0.33	0.34	-0.20	-0.24	-0.23	0.18	0.38	-0.18	-0.24	0.50	0.51
IRAI	0.26	0.26	-0.16	-0.17	-0.17	0.09	0.26	-0.17	-0.20	0.32	0.36
IREL	-0.20	-0.15	0.16	0.17	0.20	-0.22	-0.17	0.11	0.08	-0.14	-0.18
IBMO	-0.35	-0.41	0.37	0.41	0.40	-0.27	-0.51	0.32	0.38	-0.61	-0.53
IDEP	0.15	0.17	-0.29	-0.31	-0.31	0.24	0.27	-0.18	-0.22	0.30	0.25
IGAN	0.24	0.27	-0.13	-0.16	-0.15	0.19	0.23	-0.14	-0.15	0.27	0.48

Appendix C. Inter-Item Correlations

Table C-1. Correlations Within and Between Scales

	IASB	IFAB	IFDU	IPRD	IIAP	IFUD	ISEN	IRAI	IREL	IBMO	IDEP
CLNA											
CCD											
CTM											
CLFD											
CPAD											
COPI											
CRPI											
FPFM											
FPD											
FFC											
FHAB											
FFDU											
FFAB											
FATT											
FOPI											
FRPI											
SAF											
SCLS											
SOPI											
SRPI											
IREB											
IEPB											
IASB											
IFAB	0.49										
IFDU	0.46	0.69									
IPRD	-0.29	-0.38	-0.48								
IIAP	0.65	0.47	0.46	-0.31							
IFUD	0.42	0.47	0.66	-0.38	0.59						
ISEN	0.36	0.49	0.52	-0.27	0.35	0.47					
IRAI	0.35	0.35	0.39	-0.19	0.31	0.35	0.32				
IREL	-0.12	-0.16	-0.21	0.27	-0.16	-0.17	-0.06	-0.04			
IBMO	-0.38	-0.65	-0.59	0.40	-0.41	-0.48	-0.49	-0.33	0.18		
IDEP	0.15	0.22	0.21	-0.11	0.18	0.19	0.22	0.18	-0.12	-0.24	
IGAN	0.51	0.36	0.32	-0.22	0.53	0.32	0.26	0.25	-0.10	-0.29	0.15

Table Key

Column	Scale
CLNA	Community: Low Neighborhood Attachment (Higher = More Risk)
CCD	Community: Community Disorganization (Higher = More Risk)
CTM	Community: Transitions and Mobility (Higher = More Risk)
CLFD	Community: Laws and Norms Favorable to Drug Use (Higher = More Risk)
CPAD	Community: Perceived Availability of Drugs & Handguns (Higher = More Risk)
COPI	Community: Opportunities for Prosocial Involvement (Higher = More Protective)
CRPI	Community: Rewards for Prosocial Involvement (Higher = More Protective)
FPFM	Family: Poor Family Management (Higher = More Risk)
FPD	Family: Poor Discipline (Higher = More Risk)
FFC	Family: Family Conflict (Higher = More Risk)
FHAB	Family: Family History of Antisocial Behavior (Higher = More Risk)
FFDU	Family: Parental Attitudes Favorable Toward Drug Use (Higher = More Risk)
FFAB	Family: Parental Attitudes Favorable to Antisocial Behavior (Higher = More Risk)
FATT	Family: Attachment (Higher = More Protective) (Higher = More Risk)
FOPI	Family: Opportunities for Prosocial Involvement (Higher = More Protective)
FRPI	Family: Rewards for Prosocial Involvement (Higher = More Protective)
SAF	School: Academic Failure (Higher = More Risk)
SCLS	School: Little Commitment to School (Higher = More Risk)
SOPI	School: Opportunities for Prosocial Involvement (Higher = More Protective)
SRPI	School: Rewards for Prosocial Involvement (Higher = More Protective)
IREB	Peer-Individual: Rebelliousness (Higher = More Risk)
IEPB	Peer-Individual: Early Initiation of Problem Behavior (Higher = More Risk)
IASB	Peer-Individual: Antisocial Behavior (Higher = More Risk)
IFAB	Peer-Individual: Favorable Attitudes Toward Antisocial Behavior (Higher = More Risk)
IFDU	Peer-Individual: Favorable Attitudes Toward Drug Use (Higher = More Risk)
IPRD	Peer-Individual: Perceived Risks of Drug Use (Higher = More Protective)
IIAP	Peer-Individual: Interaction with Antisocial Peers (Higher = More Risk)
IFUD	Peer-Individual: Friends' Use of Drugs (Higher = More Risk)
ISEN	Peer-Individual: Sensation Seeking (Higher = More Risk)
IRAI	Peer-Individual: Rewards for Antisocial Involvement (Higher = More Risk)
IREL	Peer-Individual: Religiosity (Higher = More Protective) (Higher = More Risk)
IBMO	Peer-Individual: Belief in the Moral Order (Higher = More Protective)
IDEP	Peer-Individual: Depression (Higher = More Risk)
IGAN	Peer-Individual: Gang Involvement (Higher = More Risk)

APPENDIX D

ITEM/SUBSCALE RELIABILITY COEFFICIENTS

APPENDIX D. INTER-ITEM CORRELATIONS

Table D-1. Subscale Reliabilities

Name of Scale	Risk or Protective Factor	# of Items Needed to Compute Scale	Reliability (Cronbach's alpha)	Questions Composing Scale
Community: Low Neighborhood Attachment	Risk	2/3	.8532	q100, q090, q088
Community: Community Disorganization	Risk	4/5	.7953	q092a-d, q098
Community: Transitions and Mobility	Risk	4/5	.6389	q101, q093, q097, q099, q093
Community: Laws and Norms Favorable to Drug Use	Risk	9/10	.8382	q86a-c, q087a-d, q081, q079, q083
Community: Perceived Availability of Drugs & Handguns	Risk	4/5	.8434	q077, q078, q080, q082, q084
Community: Opportunities for Prosocial Involvement	Protective	5/6	.7507	q091, q096a-e
Community: Rewards for Prosocial Involvement	Protective	2/3	.8198	q089, q095,q102
Family: Poor Family Management	Risk	5/6	.8122	q106, q107, q108, q110, q123, q124,
Family: Poor Discipline	Risk	2/3	.7784	q109, q111, q112
Family: Family History of Antisocial Behavior	Risk	5/6	.7301	q103, q104a-d
Family: Family Conflict	Risk	2/3	.8488	q125, q126, q127
Family: Parental Attitudes Favorable Toward Drug Use	Risk	2/3	.7705	q105a-c
Family: Parental Attitudes Favorable Toward Antisocial Behavior	Risk	2/3	.6717	q105d-f
Family: Attachment to Parents	Protective	3/4	.7409	q115, q117, q118, q120
Family: Opportunities for Prosocial Involvement	Protective	2/3	.7592	q114, q121, q122
Family: Rewards for Prosocial Involvement	Protective	3/4	.7506	q113, q116, q119, q128
School: Academic Failure	Risk	2/2	.6574	q013, q023
School: Little Commitment to School	Risk	8/9	.7343	q025, q026, q027, q028a-c, q014a-c
School: Opportunities for Prosocial Involvement	Protective	4/5	.6159	q015, q016, q018, q019, q024
School: Rewards for Prosocial Involvement	Protective	3/4	.6854	q017, q020, q021, q022

Individual: Rebelliousness	Risk	2/3	.6866	q032, q035, q047
Individual: Early Initiation of Problem Behaviors	Risk	7/8	.7538	q030a-h
Individual: Impulsivity	Risk	3/4	.4275	q048, q049, q050, q051
Individual: Engaging in Antisocial Behaviors	Risk	7/8	.8058	q040a-h
Individual: Favorable Attitudes Toward Antisocial Behavior	Risk	4/5	.7715	q031a-e
Individual: Favorable Attitudes Toward Drug Use	Risk	3/4	.8359	q031f-i
Individual: Sensation Seeking	Risk	2/3	.7351	q037a-c
Individual: Depression	Risk	3/4	.8232	q054, q055, q056, q057
Individual: Religiosity	Protective	1/1	--	q053
Individual: Social Skills	Protective	n/a	--	q042, q043, q044, q045
Individual: Belief in the Moral Order	Protective	3/4	.6521	q034, q033, q036, q046
Individual: Perceived Risks of Drug Use	Protective	3/4	.8079	q052a-d
Peer: Interaction with Antisocial Peers	Risk	5/6	.7802	q029e-j
Peer: Friends' Use of Drugs	Risk	3/4	.8203	q029a-d
Peer: Rewards for Antisocial Involvement	Risk	3/4	.8467	q041a-d
Peer: Gang Involvement	Risk	3/4	.8864	q029k, q030i, q038, q039

APPENDIX E

SAMPLE ROSTER OF CLASSES

		POPULATION (1999 -2000 school year)													
COUNTY	GRADE6	GRADE7	GRADE8	GRADE9	GRADE10	GRADE11	GRADE12	Sample6	Sample7	Sample8	Sample9	Sample10	Sample11	Sample12	Total
Autauga	755	764	705	707	613	531	487	255	256	249	249	236	223	215	1,682
Baldwin	1818	1851	1770	2005	1626	1410	1189	317	318	316	322	311	302	290	2,176
Barbour	395	380	375	447	351	293	236	195	191	190	207	183	166	146	1,278
Bibb	310	305	278	319	228	167	199	172	170	161	174	143	116	131	1,068
Blount	669	705	655	672	565	470	413	244	249	242	244	229	211	199	1,618
Bullock	158	201	133	133	160	100	85	112	132	99	99	113	79	70	703
Butler	278	291	293	331	299	254	236	161	166	166	178	168	153	146	1,138
Calhoun	1355	1477	1398	1479	1249	1157	1092	299	305	301	305	294	288	284	2,077
Chambers	437	421	411	476	391	328	279	204	201	199	213	194	177	162	1,349
Cherokee	343	304	316	312	245	264	238	181	170	173	172	150	156	147	1,149
Chilton	558	566	527	497	471	396	328	228	229	222	217	212	195	177	1,479
Choctaw	181	198	171	216	158	156	142	123	131	118	138	112	111	104	837
Clarke	395	399	401	468	353	328	330	195	196	196	211	184	177	178	1,336
Clay	190	209	213	218	192	189	179	127	135	137	139	128	127	122	915
Cleburne	169	200	223	216	174	147	163	117	132	141	138	120	106	114	869
Coffee	695	668	684	631	652	589	537	247	244	246	239	242	233	224	1,674
Colbert	689	705	686	674	598	562	485	247	249	246	245	234	228	214	1,663
Conecuh	169	188	151	186	115	133	105	117	126	108	125	89	99	82	747
Coosa	145	141	135	138	117	114	99	105	103	100	102	90	88	79	666
Covington	502	544	522	589	473	424	421	218	225	221	233	212	202	201	1,511
Crenshaw	169	191	189	180	186	156	153	117	128	127	123	125	111	109	840
Cullman	956	984	1018	1025	890	790	745	274	276	279	279	268	258	253	1,889
Dale	622	636	655	659	589	551	497	237	239	242	243	233	226	217	1,637
Dallas	701	757	703	806	650	589	505	248	255	248	260	241	233	218	1,704
DeKalb	776	792	743	736	685	664	595	257	259	253	252	246	243	233	1,744
Elmore	799	792	764	873	735	587	552	259	259	256	267	252	232	227	1,752
Escambia	484	497	513	472	425	371	402	214	217	220	212	202	189	196	1,449
Etowah	1252	1206	1159	1296	1149	1097	969	294	291	289	296	288	285	275	2,018
Fayette	204	246	226	233	197	196	160	133	150	142	145	130	130	113	943
Franklin	405	464	440	435	384	381	279	197	210	205	204	192	191	162	1,361
Geneva	316	354	352	349	299	275	225	173	184	184	183	168	160	142	1,194
Greene	157	178	140	139	122	98	121	111	122	103	102	93	78	92	700
Hale	248	269	284	284	271	215	198	151	158	163	163	159	138	131	1,063
Henry	187	211	217	254	199	191	163	126	136	139	153	131	128	114	927
Houston	1251	1303	1221	1249	1140	1002	846	294	297	292	294	287	278	264	2,006
Jackson	689	735	692	695	648	574	546	247	252	247	247	241	230	226	1,690
Jefferson	8805	8898	8266	9433	8586	7168	6658	368	368	367	369	368	365	363	2,568
Lamar	217	251	243	220	204	191	202	139	152	149	140	133	128	132	972
Lauderdale	1041	1086	1032	1088	968	919	902	281	284	280	284	275	271	269	1,944
Lawrence	457	521	496	495	404	413	349	209	221	216	216	197	199	183	1,441
Lee	1417	1377	1344	1477	1268	1120	930	302	300	299	305	295	286	272	2,059
Limestone	841	947	778	858	762	640	559	264	273	257	265	255	240	228	1,783
Lowndes	209	218	221	265	204	143	144	135	139	140	157	133	104	105	914
Macon	276	280	420	323	226	188	236	161	162	201	175	142	126	146	1,113
Madison	3537	3402	3386	4006	3195	2736	2570	347	345	345	351	343	337	334	2,401
Marengo	365	368	324	326	333	310	305	187	188	176	176	178	172	170	1,247
Marion	420	420	416	420	349	332	311	201	201	200	201	183	178	172	1,334
Marshall	1128	1140	1196	1185	989	863	799	287	287	291	290	277	266	259	1,957
Mobile	5131	5157	4861	5793	4403	4058	3699	357	358	356	360	353	351	348	2,484
Monroe	349	369	350	408	324	307	300	183	188	183	198	176	171	168	1,267
Montgomery	2633	2825	2433	2335	2295	1833	1960	335	338	332	330	329	318	321	2,303
Morgan	1559	1544	1491	1552	1353	1261	1134	308	308	305	308	299	294	287	2,110

		POPULATION (1999 -2000 school year)													
COUNTY	GRADE6	GRADE7	GRADE8	GRADE9	GRADE10	GRADE11	GRADE12	Sample6	Sample7	Sample8	Sample9	Sample10	Sample11	Sample12	Total
Perry	196	198	161	193	182	132	127	130	131	113	128	123	98	95	820
Pickens	263	328	287	297	334	259	257	156	177	164	168	179	155	154	1,152
Pike	337	399	321	390	311	283	214	180	196	175	194	172	163	137	1,216
Randolph	297	307	284	312	271	252	218	168	171	163	172	159	152	139	1,124
Russell	704	703	660	843	570	484	428	249	248	243	264	229	214	202	1,650
Shelby	1617	1588	1484	1663	1393	1228	1099	310	309	305	312	301	293	285	2,115
St Clair	888	883	867	937	774	615	586	268	268	266	272	257	236	232	1,800
Sumter	215	191	211	247	195	170	196	138	128	136	150	129	118	130	929
Talladega	1016	1080	1007	1193	896	876	768	279	283	278	291	269	267	256	1,923
Tallapoosa	696	681	627	711	611	543	482	248	246	238	249	236	225	214	1,655
Tuscaloosa	1963	1961	1941	2027	1691	1496	1547	321	321	321	323	313	306	308	2,213
Walker	885	872	868	799	749	692	660	268	267	266	259	254	247	243	1,804
Washington	283	266	299	296	273	253	243	163	157	168	167	160	153	149	1,116
Wilcox	168	202	200	211	213	167	177	117	132	132	136	137	116	121	892
Winston	357	370	359	371	338	301	288	185	188	186	189	180	169	165	1,261
Total	57697	58964	56196	61073	52263	45982	42547	14439	14693	14472	14773	13933	13264	12846	**98,420**
Example							374722	25.0	24.9	25.8	24.2	26.7	28.8	30.2	
Total N	50-50 PROB	CONF-95%	SE	Sample								total surveys		98420	
121	0.25	1.96	0.05	92										26.3	
												with correlation		**135819.29**	
There are three counties where would want to sample all kids.															
because they have less than 100 in the sample.															

APPENDIX F

SAMPLE SIZE TABLES

Appendix F. Sample Size Information

Table F-1. Enrollment and Desired Sample Size, by Grade and County

	Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
County	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed
Autauga	728	340	728	340	715	338	724	339	591	316	516	300	474	290
Baldwin	1,809	420	1,867	422	1,834	421	2,057	428	1,708	416	1,468	405	1,179	387
Barbour	388	265	383	264	369	259	374	261	366	258	319	241	238	205
Bibb	279	224	328	244	268	219	318	241	191	179	180	172	174	168
Blount	696	335	724	339	663	329	656	328	570	312	504	297	435	279
Bullock	166	163	186	176	137	143	199	184	119	129	116	126	94	108
Butler	317	240	293	230	276	223	321	242	272	221	248	210	262	217
Calhoun	1,483	406	1,421	402	1,435	403	1,467	405	1,256	392	1,107	381	1,085	380
Chambers	482	292	423	276	403	270	467	288	350	253	327	244	314	239
Cherokee	326	244	327	244	301	234	325	243	262	217	228	200	240	206
Chilton	534	304	566	311	547	307	555	309	425	277	419	275	365	258
Choctaw	198	183	175	169	176	170	190	178	163	161	150	152	146	149
Clarke	404	270	405	271	401	269	456	285	365	258	316	240	301	234
Clay	194	181	198	183	198	183	209	189	193	180	170	166	163	161
Cleburne	220	195	189	178	195	181	211	190	183	174	145	149	145	149
Coffee	621	322	754	343	673	331	633	324	614	321	617	321	516	300
Colbert	643	326	724	339	670	331	700	335	593	317	542	306	507	298
Conecuh	175	169	162	160	160	159	164	162	152	154	86	100	114	125
Coosa	152	154	156	156	119	129	154	155	110	122	96	109	95	109
Covington	558	310	521	301	528	303	565	311	514	300	415	274	387	265
Crenshaw	189	178	185	175	198	183	199	184	161	160	165	162	139	144
Cullman	904	362	996	372	943	366	1,037	375	912	363	805	350	765	345
Dale	565	311	664	330	609	320	697	335	605	319	515	300	476	291
Dallas	700	335	789	348	646	326	694	334	755	344	547	307	496	295
DeKalb	808	351	819	352	772	346	779	347	674	331	640	325	565	311
Elmore	816	352	793	349	782	347	890	361	706	336	618	321	515	300
Escambia	483	292	480	292	474	290	511	299	396	268	384	264	350	253
Etowah	1,284	394	1,257	392	1,168	386	1,209	389	1,165	386	1,071	378	992	371
Fayette	216	193	240	206	216	193	213	192	200	184	186	176	184	175
Franklin	439	281	411	272	447	283	432	279	397	268	338	248	340	249
Geneva	332	246	331	246	323	242	354	254	303	235	280	225	237	204
Greene	122	131	171	166	132	139	137	143	98	111	125	134	89	103
Hale	251	211	255	213	272	221	287	228	254	213	231	201	186	176
Henry	218	194	209	189	214	192	269	220	222	197	175	169	164	162
Houston	1,204	389	1,275	394	1,219	390	1,234	391	1,100	381	1,014	373	875	359

Appendix F. Sample Size Information

Table F-1. Enrollment and Desired Sample Size, by Grade and County

	Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
County	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed
Jackson	727	340	698	335	743	342	734	341	600	318	573	313	496	295
Jefferson	8,869	481	8,928	481	8,548	480	9,285	481	8,127	479	7,385	477	6,841	475
Lamar	210	190	254	213	182	173	217	194	216	193	182	173	178	171
Lauderdale	1,063	378	1,081	379	1,038	375	1,061	378	969	369	950	367	821	352
Lawrence	503	297	477	291	523	302	513	300	427	277	370	259	386	265
Lee	1,414	402	1,441	403	1,396	401	1,472	405	1,277	394	1,158	385	1,026	374
Limestone	881	360	872	359	887	360	791	349	761	344	668	330	579	314
Lowndes	207	188	227	199	226	199	248	210	199	184	185	175	112	123
Macon	337	248	271	221	330	245	356	255	271	221	170	166	203	186
Madison	3,667	457	3,506	455	3,362	453	3,925	459	3,194	451	2,725	444	2,727	444
Marengo	385	264	354	254	346	251	348	252	292	230	282	226	292	230
Marion	386	265	412	273	417	274	438	280	344	250	328	244	306	236
Marshall	1,147	385	1,156	385	1,116	382	1,254	392	1,019	374	886	360	801	350
Mobile	5,125	468	5,117	468	5,078	468	5,557	470	4,464	464	3,923	459	3,816	458
Monroe	304	235	350	253	348	252	369	259	325	243	269	220	310	237
Montgomery	2,833	445	2,848	446	2,610	441	2,259	434	2,141	430	2,167	431	1,748	418
Morgan	1,608	412	1,587	411	1,492	406	1,594	411	1,396	401	1,280	394	1,114	382
Perry	189	178	217	194	172	167	183	174	161	160	150	152	125	134
Pickens	289	229	320	241	288	228	245	208	296	232	302	234	231	201
Pike	373	260	391	266	336	247	361	256	345	251	251	211	261	216
Randolph	299	233	322	242	320	241	285	227	269	220	231	201	229	200
Russell	697	335	730	340	666	330	809	351	578	314	492	295	433	279
Shelby	1,665	414	1,580	410	1,579	410	1,571	410	1,455	404	1,312	396	1,126	383
St Clair	943	366	854	356	882	360	937	366	797	349	642	326	551	308
Sumter	218	194	212	191	182	173	229	200	220	195	172	167	180	172
Talladega	1,102	381	1,056	377	1,053	377	1,102	381	955	368	792	349	806	350
Tallapoosa	725	339	734	341	678	332	686	333	594	317	553	308	483	292
Tuscaloosa	2,034	427	2,033	427	1,868	422	1,998	426	1,752	418	1,478	405	1,408	402
Walker	865	358	889	361	809	351	871	358	689	334	661	329	623	322
Washington	276	223	268	219	276	223	303	235	252	212	256	214	233	202
Wilcox	211	190	176	170	194	181	209	189	198	183	173	168	164	162
Winston	368	259	373	260	359	256	354	254	341	249	322	242	282	226
Total	58,824	19,763	59,139	19,866	56,787	19,531	60,251	19,965	51,869	18,876	46,351	18,026	42,498	17,423

Note: The first column for each grade shows the number of students enrolled in the county. The second column shows the number of

Appendix F. Sample Size Information

Table F-1. Enrollment and Desired Sample Size, by Grade and County

	Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
County	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed	Enrolled	Sample Needed

students needed in the sample to produce a precision of .053% at the 95% confidence level.

APPENDIX G

MAPS OF RESPONSE RATES, COMPLETION RATES, AND DISCARDED SURVEY RATES

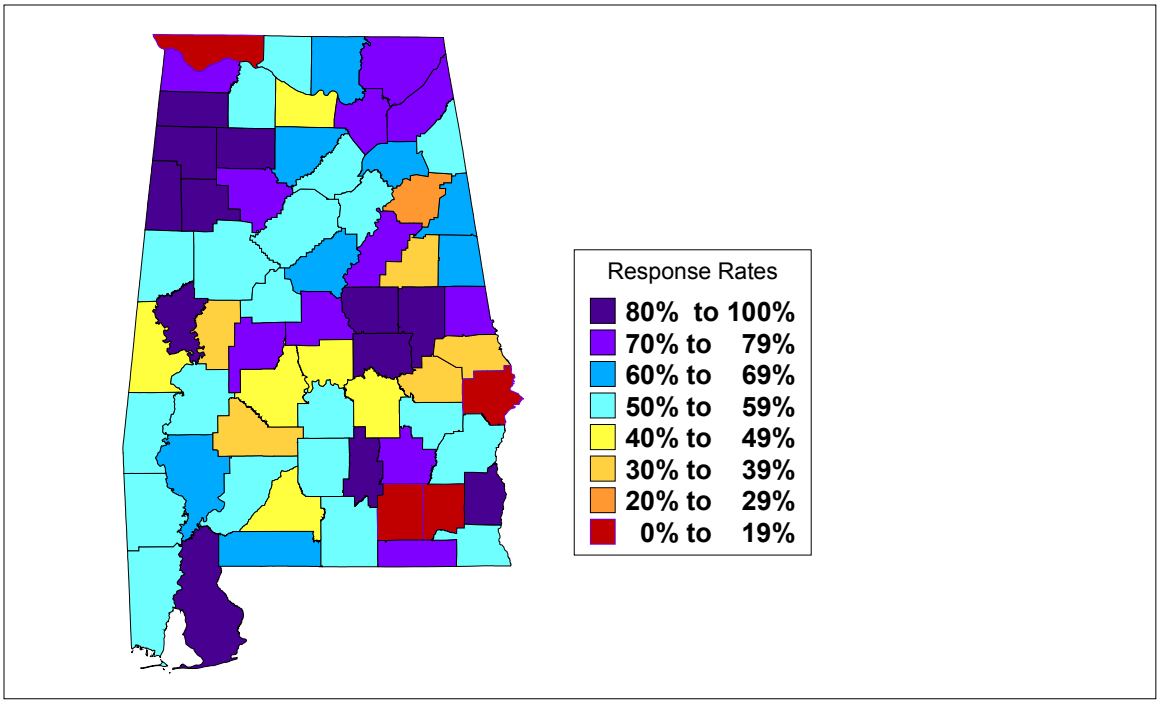

Figure G-1. County response rates.

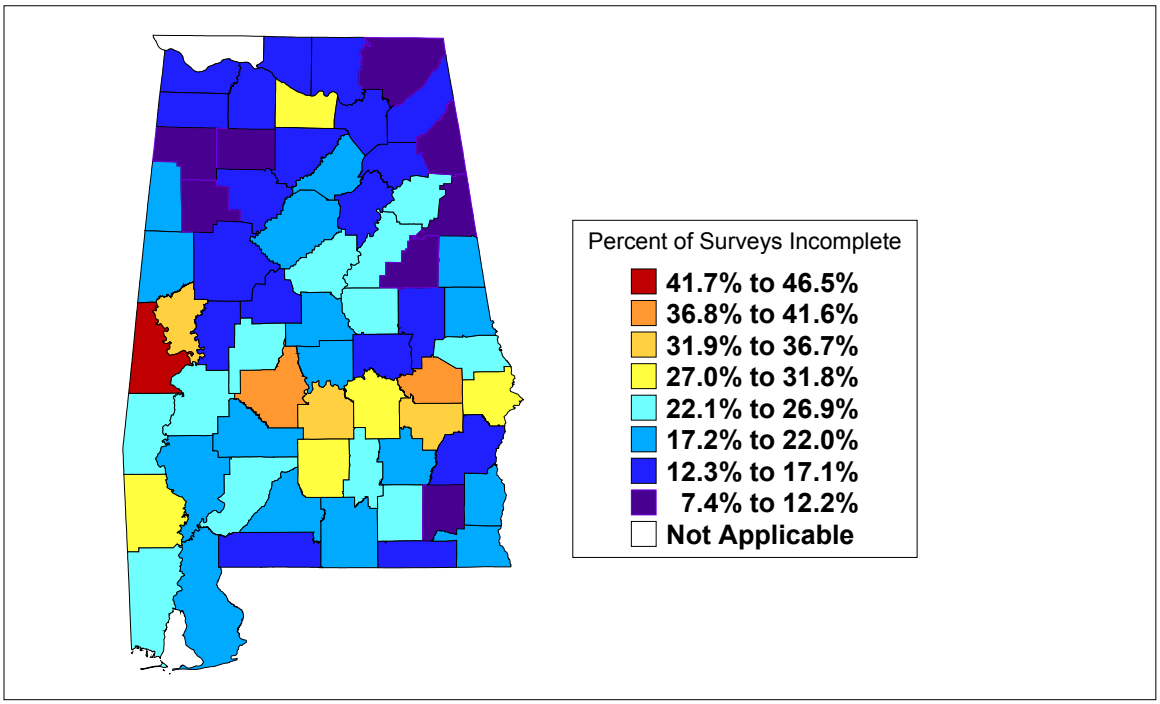

Figure G-2. Percent of surveys that were incomplete.

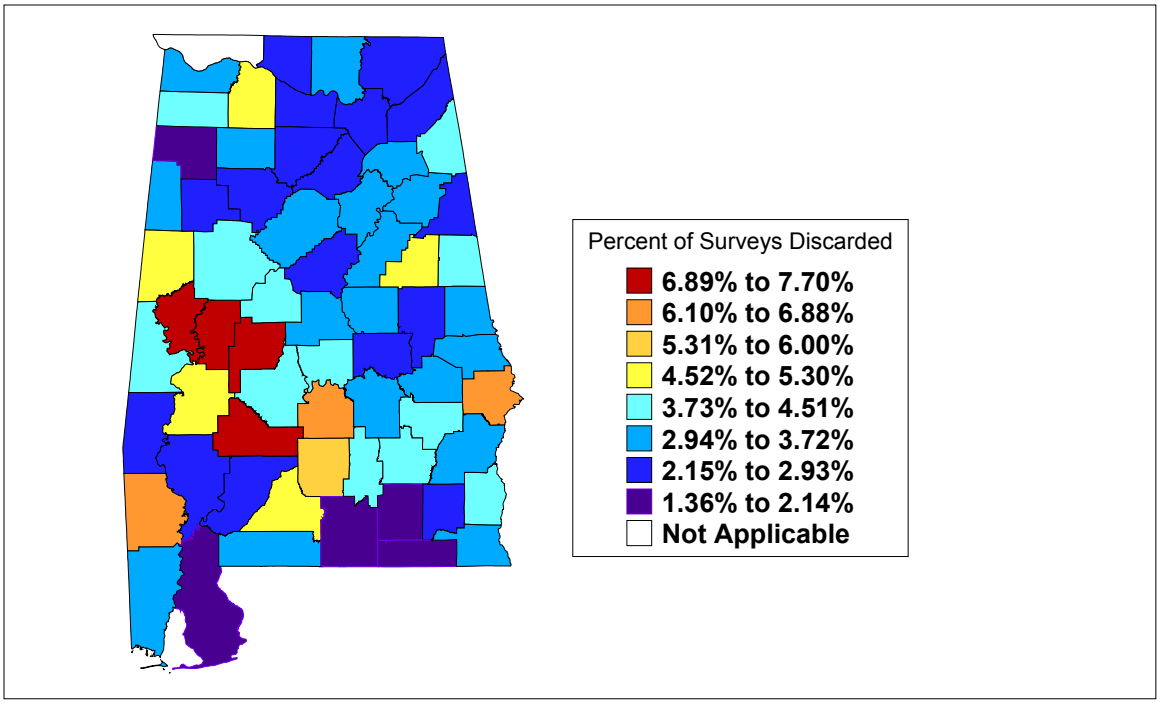

Figure G-3. Percent of surveys that were discarded.

APPENDIX H

INSTRUCTIONS FOR SURVEY ADMINISTRATION

Dear Principals:

Thank you again for participating in this important survey. This box contains all of the materials you need to administer the Alabama Youth Survey. Please do not discard the box – you will return the completed surveys to us in it.

We have randomly selected some or all of the classes you listed on the enclosed classroom roster. Those classes have been highlighted for you. We have included one envelope of materials for each class. Included in the envelopes are:

Parent Consent Forms – this form explains the survey to parents and give them the option to contact the school and decline their child's participation
Student Assent Forms – this form explains the survey to students the day it is administered
Survey Instructions – these instructions tell teachers what procedures need to be followed when administering the survey
Classroom Instructions – these instructions are read aloud to the students
Surveys – there are 30 surveys in each envelope. If some classes have more than 30 students, please take surveys from classes that have less than 30 students.

After giving selected teachers their envelopes, please instruct the teachers to distribute the Parental Consent Forms to their **2nd period or block** students as soon as they receive their packet of materials.

On the day you selected to administer the survey – which should be a Tuesday, Wednesday, or Thursday during the last two weeks of January or the first two weeks in February – teachers should first read the Survey Instructions, which are written to them. Teachers should then distribute the student assent forms and read the Classroom Instructions out loud to their students. Finally, teachers should distribute the surveys provided.

Once the survey is completed, teachers should place their class' surveys back into the envelope they came from, seal the envelope and fill out the short form that is printed on it. Envelopes should be returned to you at the front office. All envelopes will then go back in this box and the enclosed return UPS label should be affixed to it. Please seal the box, and call 1-800-PICK-UPS to request that the package be picked up. *All completed surveys should be sent back no later than the Friday of the week they were conducted.*

Finally, please make sure to call, fax, or email our subcontractors, DATACORP, to let them know you received these materials. Their phone number is (401) 331-1500, fax is (401) 331-1551, and email is mraposa@mjdatacorp.com

Thank you again for your help.

Sincerely,

Joseph Drop
Project Coordinator

APPENDIX I

PARENT INFORMATION LETTER

Dear Parent/Guardian:

Between January 22, 2002, and February 14, 2002, students in grades 6 through 12 throughout the State of Alabama will be taking part in an anonymous survey. The survey is studying adolescent health behaviors as part of an important study being conducted by the State of Alabama Department of Mental Health and Mental Retardation. This survey asks questions about behaviors and perceptions of risk and protective factors affecting youths. The study is funded in part by the Federal Government's Center for Substance Abuse Prevention.

The statewide survey is endorsed by Dr. Ed Richardson, State Superintendent of Education, and is supported by school Superintendents and Principals. Survey results will be extremely beneficial to the State and to school districts in determining the areas of greatest need for assistance in implementing prevention programs.

THE SURVEY IS COMPLETELY ANONYMOUS
NO INFORMATION ABOUT YOUR CHILD'S IDENTITY IS ASKED

Your child's participation is completely voluntary. Each child will be given the option to skip any question that he or she prefers not to answer. Survey administrators will arrange classroom seating so that no other student(s) will be able to see your child's responses. When completed, each student will have their survey placed in an envelope that will be sealed and mailed to the consulting firm for processing. Neither your child's teacher nor principal will view your child's responses. If you would like to view the survey, you may do so by contacting the principal at your child's school to schedule a time prior to the survey administration date. Survey results will be compiled in a comprehensive report that will be available to the public.

If you do **not** wish your child to participate in this anonymous survey, you must complete the information below and return this correspondence to your Principal immediately. If you wish your child to participate in this historical survey, simply discard this form.

Sincerely,

Joseph Drop, Chief
Office of Research, Evaluation and Information
Statewide Youth Survey Project Director

Print Name of Student: _____

Print Name of Student's School: _____

Print Name of Student's Principal: _____

Print reason(s) for not participating: _____

_____

_____

Print Name of Parent: _____

Signature of Parent: _____ Date: _____

OMB No. 0930-0213 Expires 06/30/2003

APPENDIX J

DATA DICTIONARY

APPENDIX J. DATA DICTIONARY

Description of Variable Naming Scheme
The tables on the following pages contain the variable name, variable label, value labels (where applicable), formulae, and a description of the scale or topic of the variable.

All variables that correspond directly to a question from the instrument follow a naming scheme.

1. If there was a question number, the variable name begins with “q” followed by the three digit question number, with leading zeroes. (For example, “q001” for the question “1. How old are you?”)

2. If the question had lettered subquestions, each subquestion is a separate variable, and the letter is placed directly after the question number. (For instance, “q004a” for the question “4a. Are you Hispanic or Latino?”)

3. If the question allowed multiple responses, each possible response is a separate variable, and the responses are each assigned a number to correspond with the order they appear on the page. This number, including leading zeroes where applicable, is placed after an underscore, after the question number or subquestion letter. (For example, “q004b_1” for the question “4b. Which of the following best describes you? Mark one or more” answer 1, “White.”)

Table J-1. Description of Variables: Individual Items

Variable Name	Variable Label	Value Labels
q001	Age	0, 10; 1, 11; 2, 12; 3, 13; 4, 14; 5, 15; 6, 16; 7, 17; 8, 18; 9, 19 or older
q002	Grade	1, 6th; 2, 7th; 3, 8th; 4, 9th; 5, 10th; 6, 11th; 7, 12th
q003	Gender	1, Male; 2, Female
q004a	Hispanic or Latino	1, Yes; 2, No
q004b_1	White	1, White
q004b_2	Black/African American	1, Black/African American
q004b_3	American Indian/Alaska Native	1, American Indian/Alaska Native
q004b_4	Asian	1, Asian
q004b_5	Native Hawaiian/Other Pacific Islander	1, Native Hawaiian/Other Pacific Islander
q005_01	Live with mother	1, Mother
q005_02	Live with foster mother	1, Foster Mother
q005_03	Live with stepmother	1, Stepmother
q005_04	Live with grandmother	1, Grandmother
q005_05	Live with aunt	1, Aunt
q005_06	Live with sister(s)	1, Sister(s)
q005_07	Live with stepsister(s)	1, Stepsister(s)
q005_08	Live with other adults	1, Other adults
q005_09	Live with father	1, Father
q005_10	Live with foster father	1, Foster Father
q005_11	Live with stepfather	1, Stepfather
q005_12	Live with grandfather	1, Grandfather
q005_13	Live with uncle	1, Uncle
q005_14	Live with brother(s)	1, Brother(s)
q005_15	Live with stepbrother(s)	1, Stepbrother(s)
q005_16	Live with other children	1, Other children
q006	Number of older siblings	0, 0; 1, 1; 2, 2; 3, 3; 4, 4; 5, 5; 6, 6 or more
q007	Number of younger siblings	0, 0; 1, 1; 2, 2; 3, 3; 4, 4; 5, 5; 6, 6 or more
q008	Language spoken at home	1, English; 2, Spanish; 3 Another language
q009	Zip code	Numeric

Variable Name	Variable Label	Value Labels
q010	Father's education	1, Completed grade school or less; 2, Some high school; 3, Completed high school; 4, some college; 5, Completed college; 6, Graduate or professional school after college; 7, Do not know; 8, Does not apply
q011	Mother's education	1, Completed grade school or less; 2, Some high school; 3, Completed high school; 4, some college; 5, Completed college; 6, Graduate or professional school after college; 7, Do not know; 8, Does not apply
q012	Where are you living now?	1, On a farm; 2, In the country, not on a farm; 3, In a city, town, or suburb
q013	Average grades	1, Mostly F's; 2, Mostly D's; 3, Mostly C's; 4, Mostly B's; 5, Mostly A's
q014a	Missed school days – sick	0, None; 1, 1 day; 2, 2 days; 3, 3 days; 4, 4-5 days; 5, 6-10 days; 6, 11 or more
q014b	Missed school days – cut	0, None; 1, 1 day; 2, 2 days; 3, 3 days; 4, 4-5 days; 5, 6-10 days; 6, 11 or more
q014c	Missed school days – other	0, None; 1, 1 day; 2, 2 days; 3, 3 days; 4, 4-5 days; 5, 6-10 days; 6, 11 or more
q015	Students have chances to help decide things	1, NO!; 2, no; 3, yes; 4, YES!
q016	Teachers ask me to work on classroom projects	1, NO!; 2, no; 3, yes; 4, YES!
q017	My teacher notices when I am doing a good job	1, NO!; 2, no; 3, yes; 4, YES!
q018	Chances to get involved in sports, clubs, activities	1, NO!; 2, no; 3, yes; 4, YES!
q019	Chances to talk to teachers 1 on 1	1, NO!; 2, no; 3, yes; 4, YES!
q020	I feel safe at my school	1, NO!; 2, no; 3, yes; 4, YES!
q021	The school lets my parents know when I do well	1, NO!; 2, no; 3, yes; 4, YES!
q022	My teachers praise me when I do well	1, NO!; 2, no; 3, yes; 4, YES!
q023	Are your school grades better than most	1, NO!; 2, no; 3, yes; 4, YES!
q024	I have lots of chances to be part of discussions	1, NO!; 2, no; 3, yes; 4, YES!
q025	How often is school work meaningful and important	1, Never; 2, Seldom; 3, Sometimes; 4, Often; 5, Almost Always
q026	How interesting are your courses to you	1, Very interesting an stimulating; 2, Quite interesting; 3, Fairly interesting; 4, Slightly dull; 5, Very dull
q027	How important are the things you are learning for your life	1, Very important; 2, Quite important, 3, Fairly important; 4, Slightly important; 5, Not at all important
q028a	How often did you enjoy being in school	1, Never; 2, Seldom; 3, Sometimes; 4, Often; 5, Almost Always

Variable Name	Variable Label	Value Labels
q028b	How often did you hate being in school	1, Never; 2, Seldom; 3, Sometimes; 4, Often; 5, Almost Always
q028c	How often did you try to do your best in school	1, Never; 2, Seldom; 3, Sometimes; 4, Often; 5, Almost Always
q029a	4 best friends - smoked cigarettes	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029b	4 best friends - tried alcohol	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029c	4 best friends - used marijuana	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029d	4 best friends - used LSD, amphetamines, other drugs	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029e	4 best friends - been suspended from school	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029f	4 best friends - carried a handgun	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029g	4 best friends - sold drugs	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029h	4 best friends - stolen a motor vehicle	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029i	4 best friends - been arrested	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029j	4 best friends - dropped out of school	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q029k	4 best friends - been members of a gang	0, None; 1, 1; 2, 2; 3, 3; 4, 4
q030a	How old were you - smoked marijuana	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030b	How old were you - smoked a cigarette	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030c	How old were you - had more than a sip of alcohol	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030d	How old were you - began drinking regularly	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030e	How old were you - got suspended	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030f	How old were you - got arrested	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030g	How old were you - carried a handgun	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030h	How old were you - attacked someone	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q030i	How old were you – belonged to a gang	1, Never Have; 2, 10 or younger; 3, 11; 4, 12; 5, 13; 6, 14; 7, 15; 8, 16; 9, 17 or older
q031a	How wrong is it - take a handgun to school	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031b	How wrong is it - steal more than $5	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all

Variable Name	Variable Label	Value Labels
q031c	How wrong is it - pick a fight	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031d	How wrong is it - attack someone	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031e	How wrong is it - stay away from school	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031f	How wrong is it - drink alcohol	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031g	How wrong is it - smoke cigarettes	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031h	How wrong is it - smoke marijuana	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q031i	How wrong is it - use LSD, cocaine, amphetamines, other	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q032	I ignore rules that get in my way	1, Very false; 2, Somewhat false; 3, Somewhat true; 4, Very true
q033	It is all right to beat people up if they start the fight	1, NO!; 2, no; 3, yes; 4, YES!
q034	It is important to be honest with your parents	1, NO!; 2, no; 3, yes; 4, YES!
q035	I do the opposite of what people tell me	1, Very false; 2, Somewhat false; 3, Somewhat true; 4, Very true
q036	I think it is okay to take something without asking	1, NO!; 2, no; 3, yes; 4, YES!
q037a	How many times - done what feels good	1, Never; 2, I've done it, but not in the past year; 3, Less than once a month; 4, About once a month; 5, 2 or 3 times a month; 6, Once a week or more
q037b	How many times - done something dangerous on a dare	1, Never; 2, I've done it, but not in the past year; 3, Less than once a month; 4, About once a month; 5, 2 or 3 times a month; 6, Once a week or more
q037c	How many times - done crazy things	1, Never; 2, I've done it, but not in the past year; 3, Less than once a month; 4, About once a month; 5, 2 or 3 times a month; 6, Once a week or more
q038	Have you ever belonged to a gang	1, Yes; 2, No
q039	Did the gang have a name?	1, Yes; 2, No; 3, I have never belonged to a gang
q040a	How many times 12 months - been suspended from school	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040b	How many times 12 months - carried a handgun	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040c	How many times 12 months - sold drugs	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040d	How many times 12 months - stolen a motor vehicle	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040e	How many times 12 months - been arrested	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times

Variable Name	Variable Label	Value Labels
q040f	How many times 12 months - attacked someone	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040g	How many times 12 months - been drunk or high at school	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q040h	How many times 12 months - taken a handgun to school	1, Never; 2, 1 to 2 times; 3, 3 to 5 times; 4, 6 to 9 times; 5, 10 to 19 times; 6, 20 to 29 times; 7, 30 to 39 times; 8, 40+ times
q041a	Would you be cool - smoked cigarettes	1, None; 2, Little chance; 3, Some chance; 4, Pretty good chance; 5, Very good chance
q041b	Would you be cool - began drinking	1, None; 2, Little chance; 3, Some chance; 4, Pretty good chance; 5, Very good chance
q041c	Would you be cool - smoked marijuana	1, None; 2, Little chance; 3, Some chance; 4, Pretty good chance; 5, Very good chance
q041d	Would you be cool – carried a handgun	1, None; 2, Little chance; 3, Some chance; 4, Pretty good chance; 5, Very good chance
q042	Would you let a friend steal a CD?	1, Ignore her; 2, Grab a CD and leave the store; 3, Tell her to put the CD back; 4, Act like it is a joke, and ask her to put the CD back
q043	Would you go out with friends against mom's wishes?	1, Leave the house anyway; 2, Explain what you are going to do with your friends tell her when you will get home and ask if you can go out; 3, Not say anything and start watching TV; 4, Get into an argument with her
q044	Would you shove back?	1, Push the person back; 2, Say “excuse me” and keep on walking; 3, Say, "Watch where you're going" and keep walking; 4, Swear at the person and walk away
q045	Would you drink at a party?	1, Drink it; 2, Tell your friend “No thanks I don’t drink," and suggest that you and your friend go do something else; 3, Just say “No thanks” and walk away; 4, Make up a good excuse tell you friend you had something else to do and leave
q046	I think it is sometimes okay to cheat at school	1, NO!; 2, no; 3, yes; 4, YES!
q047	I like to see how much I can get away with	1, Very false; 2, Somewhat false; 3, Somewhat true; 4, Very true
q048	It is important to think before you act	1, NO!; 2, no; 3, yes; 4, YES!
q049	Do you have to have everything right away?	1, NO!; 2, no; 3, yes; 4, YES!
q050	Do you switch from activity to activity?	1, NO!; 2, no; 3, yes; 4, YES!
q051	I often do things without thinking	1, NO!; 2, no; 3, yes; 4, YES!
q052a	How much harm - smoke 1 or 2 packs of cigarettes a day	1, No risk; 2, Slight risk; 3, Moderate risk; 4, Great risk

Variable Name	Variable Label	Value Labels
q052b	How much harm - try marijuana once or twice	1, No risk; 2, Slight risk; 3, Moderate risk; 4, Great risk
q052c	How much harm - smoke marijuana regularly	1, No risk; 2, Slight risk; 3, Moderate risk; 4, Great risk
q052d	How much harm - drink every day	1, No risk; 2, Slight risk; 3, Moderate risk; 4, Great risk
q053	How often do you attend religious services?	1, Never; 2, Rarely; 3, 1-2 times a month; 4, About once a week or more
q054	Sometimes I think life is not worth it	1, NO!; 2, no; 3, yes; 4, YES!
q055	At times I think I am no good at all	1, NO!; 2, no; 3, yes; 4, YES!
q056	All in all, I am inclined to think I am a failure	1, NO!; 2, no; 3, yes; 4, YES!
q057	Have you felt depressed or sad most days	1, NO!; 2, no; 3, yes; 4, YES!
q058	Have you ever used smokeless tobacco	1, Never; 2, Once or twice; 3, Once in a while but not regularly; 4, Regularly in the past; 5, Regularly now
q059	How frequently used smokeless tobacco in the last 30 days	1, Never; 2, Once or twice; 3, Once in a while but not regularly; 4, Regularly in the past; 5, Regularly now
q060	Have you ever smoked cigarettes	1, Never; 2, Once or twice; 3, Once in a while but not regularly; 4, Regularly in the past; 5, Regularly now
q061	How frequently smoked cigarettes in the last 30 days	1, Not at all; 2, Less than one cigarette per day; 3, One to five cigarettes per day; 4, About one-half pack per day; 5, About one pack per day; 6, About one and one-half packs per day; 7, Two packs or more per day
q062	Occasions drunk alcohol in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q063	Occasions drunk alcohol last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q064	In last 2 weeks, how many alcohol binges	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q065	Occasions used marijuana in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q066	Occasions used marijuana last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q067	Occasions used LSD or psychedelics in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q068	Occasions used LSD or psychedelics last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q069	Occasions used cocaine or crack in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q070	Occasions used cocaine or crack last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q071	Occasions used inhalants in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q072	Occasions used inhalants last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q073	Occasions used derbisol (a fake drug) in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q074	Occasions used derbisol (a fake drug) last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more

Variable Name	Variable Label	Value Labels
q075	Occasions used other drugs in life	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q076	Occasions used other drugs last 30 days	1, 0; 2, 1-2; 3, 3-5; 4, 6-9; 5, 10-19; 6, 20-39; 7, 40 or more
q077	How easy would it be to get alcohol	1, Very hard; 2, Sort of hard; 3, Sort of easy; 4, Very easy
q078	How easy would it be to get cigarettes	1, Very hard; 2, Sort of hard; 3, Sort of easy; 4, Very easy
q079	If a kid smoked marijuana, would he get caught?	1, NO!; 2, no; 3, yes; 4, YES!
q080	How easy would it be to get cocaine, lsd, etc.	1, Very hard; 2, Sort of hard; 3, Sort of easy; 4, Very easy
q081	If a kid drank alcohol, would he get caught?	1, NO!; 2, no; 3, yes; 4, YES!
q082	How easy would it be to get a handgun	1, Very hard; 2, Sort of hard; 3, Sort of easy; 4, Very easy
q083	If a kid carried a handgun, would he get caught?	1, NO!; 2, no; 3, yes; 4, YES!
q084	How easy would it be to get marijuana	1, Very hard; 2, Sort of hard; 3, Sort of easy; 4, Very easy
q085	If a kid smoked cigarettes, would he get caught?	1, NO!; 2, no; 3, yes; 4, YES!
q086a	How wrong would adults think to use marijuana	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q086b	How wrong would adults think to drink alcohol	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q086c	How wrong would adults think to smoke cigarettes	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q087a	How many adults do you know - used drugs	1, None; 2, 1 adult; 3, 2 adults, 4, 3 or 4 adults; 5, 5 or more adults
q087b	How many adults do you know - sold drugs	1, None; 2, 1 adult; 3, 2 adults, 4, 3 or 4 adults; 5, 5 or more adults
q087c	How many adults do you know - committed crimes	1, None; 2, 1 adult; 3, 2 adults, 4, 3 or 4 adults; 5, 5 or more adults
q087d	How many adults do you know - gotten drunk or high	1, None; 2, 1 adult; 3, 2 adults, 4, 3 or 4 adults; 5, 5 or more adults
q088	I would miss my neighborhood	1, NO!; 2, no; 3, yes; 4, YES!
q089	My neighbors notice when I do a good job	1, NO!; 2, no; 3, yes; 4, YES!
q090	I like my neighborhood	1, NO!; 2, no; 3, yes; 4, YES!
q091	There are a lot of adults I can talk to	1, NO!; 2, no; 3, yes; 4, YES!
q092a	What describes your neighborhood - crime, drug selling	1, NO!; 2, no; 3, yes; 4, YES!
q092b	What describes your neighborhood – fights	1, NO!; 2, no; 3, yes; 4, YES!
q092c	What describes your neighborhood - abandoned buildings	1, NO!; 2, no; 3, yes; 4, YES!
q092d	What describes your neighborhood – graffiti	1, NO!; 2, no; 3, yes; 4, YES!
q093	People move in and out of my neighborhood a lot	1, NO!; 2, no; 3, yes; 4, YES!
q094	How many times have you changed homes since Kindergarten	1, Never; 2, 1-2 times; 3, 3-4 times; 4, 5-6 times; 5, 7 or more times
q095	People in my neighborhood are proud of me	1, NO!; 2, no; 3, yes; 4, YES!
q096a	Which is available - sports teams	1, Yes; 2, No

Variable Name	Variable Label	Value Labels
q096b	Which is available – scouting	1, Yes; 2, No
q096c	Which is available - boys & girls clubs	1, Yes; 2, No
q096d	Which is available - 4-H clubs	1, Yes; 2, No
q096e	Which is available - service clubs	1, Yes; 2, No
q097	Have you changed schools in the past year	1, No; 2, Yes
q098	I feel safe in my neighborhood	1, NO!; 2, no; 3, yes; 4, YES!
q099	How many times have you changed schools since Kindergarten	1, Never; 2, 1-2 times; 3, 3-4 times; 4, 5-6 times; 5, 7 or more times
q100	I would like to get out of my neighborhood	1, NO!; 2, no; 3, yes; 4, YES!
q101	Have you changed homes in the past year	1, No; 2, Yes
q102	There are people in my neighborhood who encourage me	1, NO!; 2, no; 3, yes; 4, YES!
q103	Has anyone in your family had a severe alcohol or drug problem	1, No; 2, Yes
q104a	Have your siblings drunk alcohol	1, No; 2, Yes; 3, I don't have any brothers or sisters
q104b	Have your siblings smoked marijuana	1, No; 2, Yes; 3, I don't have any brothers or sisters
q104c	Have your siblings smoked cigarettes	1, No; 2, Yes; 3, I don't have any brothers or sisters
q104d	Have your siblings taken a handgun to school	1, No; 2, Yes; 3, I don't have any brothers or sisters
q104e	Have your siblings been suspended or expelled	1, No; 2, Yes; 3, I don't have any brothers or sisters
q105a	How wrong would your parents think - drink alcohol	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q105b	How wrong would your parents think - smoke cigarettes	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q105c	How wrong would your parents think - smoke marijuana	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q105d	How wrong would your parents think - steal $5	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q105e	How wrong would your parents think - draw graffiti	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q105f	How wrong would your parents think – pick a fight	1, Very wrong; 2, Wrong; 3, A little bit wrong; 4, Not wrong at all
q106	The rules in my family are clear	1, NO!; 2, no; 3, yes; 4, YES!
q107	One of my parents knows where I am and who I am with	1, NO!; 2, no; 3, yes; 4, YES!
q108	My parents want me to call if I am going to be late	1, NO!; 2, no; 3, yes; 4, YES!
q109	If you drank, would you get caught by your parents	1, NO!; 2, no; 3, yes; 4, YES!
q110	My family has clear rules about alcohol and drug use	1, NO!; 2, no; 3, yes; 4, YES!
q111	If you carried a handgun, would you get caught by your parents	1, NO!; 2, no; 3, yes; 4, YES!

Variable Name	Variable Label	Value Labels
q112	If you skipped school would you get caught by your parents	1, NO!; 2, no; 3, yes; 4, YES!
q113	My parents notice when I am doing a good job	1, Never or almost never; 2, Sometimes; 3, Often; 4, All the time
q114	My parents ask me what I think	1, NO!; 2, no; 3, yes; 4, YES!
q115	Do you feel close to your mother	1, NO!; 2, no; 3, yes; 4, YES!
q116	Do you enjoy spending time with your mother	1, NO!; 2, no; 3, yes; 4, YES!
q117	Do you share your thoughts and feelngs with your mother	1, NO!; 2, no; 3, yes; 4, YES!
q118	Do you feel close to your father	1, NO!; 2, no; 3, yes; 4, YES!
q119	Do you enjoy spending time with your father	1, NO!; 2, no; 3, yes; 4, YES!
q120	Do you share your thoughts and feelngs with your father	1, NO!; 2, no; 3, yes; 4, YES!
q121	If I had a personal problem, I could ask my mom or dad	1, NO!; 2, no; 3, yes; 4, YES!
q122	My parents give me lots of chances to do fun things with them	1, NO!; 2, no; 3, yes; 4, YES!
q123	My parents ask if I have gotten my homework done	1, NO!; 2, no; 3, yes; 4, YES!
q124	Would your parents know if you did not come home on time	1, NO!; 2, no; 3, yes; 4, YES!
q125	People in my family often insult or yell at each other	1, NO!; 2, no; 3, yes; 4, YES!
q126	People in my family have serious arguments	1, NO!; 2, no; 3, yes; 4, YES!
q127	We argue about the same things in my family over and over	1, NO!; 2, no; 3, yes; 4, YES!
q128	How often do parents tell you they are proud of you	1, Never or almost never; 2, Sometimes; 3, Often; 4, All the time
q129	How important were the questions on this survey	1, Not too important; 2, Fairly important; 3, Important; 4, Very Important
q130	How honest were you in filling out this survey	1, I was very honest; 2, I was honest pretty much of the time; 3, I was honest some of the time; 4, I was honest once in a while; 5, I was not honest at all

Table J-2. Description of Variables: Risk and Protective Factor Scale Scores

Variable Name	Variable Label	Formula[1]
s_clna	Community: Low Neighborhood Attachment (Higher = More Risk)	Mean(r100, r090, r088)
s_ccd	Community: Community Disorganization (Higher = More Risk)	Mean(r092a, r092b, r092c, r092d, r098)
s_ctm	Community: Transitions and Mobility (Higher = More Risk)	Mean(r101, r094, r097, r099, r093)
s_clfd	Community: Laws and Norms Favorable to Drug Use (Higher = More Risk)	Mean(r086a, r096b, r086c, r087a, r087b, r087c, r087d, r081, r079, r083)
s_cpad	Community: Perceived Availability of Drugs & Handguns (Higher = More Risk)	Mean(r077, r078, r084, r080, r082)
s_copi	Community: Opportunities for Prosocial Involvement (Higher = More Protective)	Mean(r091, r096a, r096b, r096c, r096d, r096e)
s_crpi	Community: Rewards for Prosocial Involvement (Higher = More Protective)	Mean(r089, r102, r095)
s_fpfm	Family: Poor Family Management (Higher = More Risk)	Mean(r123, r108, r124, r107, r106, r110)
s_fpd	Family: Poor Discipline (Higher = More Risk)	Mean(r109, r112, r111)
s_ffc	Family: Family Conflict (Higher = More Risk)	Mean(r125, r126, r127)
s_fhab	Family: Family History of Antisocial Behavior (Higher = More Risk)	Mean(r103, r104a, r104b, r104c, r104d, r104e)
s_ffdu	Family: Parental Attitudes Favorable Toward Drug Use (Higher = More Risk)	Mean(r105a, r105b, r105c)
s_ffab	Family: Parental Attitudes Favorable to Antisocial Behavior (Higher = More Risk)	Mean(r105d, r105e, r105f)
s_fatt	Family: Attachment (Higher = More Protective) (Higher = More Risk)	Mean(r115, r117, r118, r120)
s_fopi	Family: Opportunities for Prosocial Involvement (Higher = More Protective)	Mean(r122, r114, r121)

[1] *Each formula refers to variables beginning with the letter "r". These variables are recoded versions of the variables with that begin with the letter "q," as shown in the first table. The "q" variables were recoded so that the minimum was 0 and the maximum was 10. Items in risk scales were recoded so that risk increased with the value of the variable, while items in the protective scales were recoded so that protection increased with the value of the variable.

Variable Name	Variable Label	Formula[1]
s_frpi	Family: Rewards for Prosocial Involvement (Higher = More Protective)	Mean(r113, r128, r116, r119)
s_saf	School: Academic Failure (Higher = More Risk)	Mean(r013, r023)
s_slcs	School: Little Commitment to School (Higher = More Risk)	Mean(r025, r026, r027, r028a, r028b, r028c, r014a, r014b, r014c)
s_sopi	School: Opportunities for Prosocial Involvement (Higher = More Protective)	Mean(r015, r019, r016, r018, r024)
s_srpi	School: Rewards for Prosocial Involvement (Higher = More Protective)	Mean(r017, r021, r020, r022)
s_ireb	Peer-Individual: Rebelliousness (Higher = More Risk)	Mean(r035, r032, r047)
s_iepb	Peer-Individual: Early Initiation of Problem Behavior (Higher = More Risk)	Mean(r030a, r030b, r030c, r030d, r030e, r030f, r030g, r030h)
s_iepbc	Peer-Individual: Early Initiation of Problem Behavior, Excluding Substance Use (Higher = More Risk)	Mean(r030a, r030b, r030c, r030d, r030e, r030f, r030g, r030h)
s_iimp	Peer-Individual: Impulsiveness (Higher = More Risk)	Mean(r048, r049, r051, r050)
s_iasb	Peer-Individual: Antisocial Behavior (Higher = More Risk)	Mean(r040a, r040b, r040c, r040d, r040e, r040f, r040g, r040h)
s_ifab	Peer-Individual: Favorable Attitudes Toward Antisocial Behavior (Higher = More Risk)	Mean(r031a, r031b, r031c, r031d, r031e)
s_ifdu	Peer-Individual: Favorable Attitudes Toward Drug Use (Higher = More Risk)	Mean(r031f, r031g, r031h, r031i)
s_iprd	Peer-Individual: Perceived Risks of Drug Use (Higher = More Protective)	Mean(r052a, r052b, r052c, r052d)
s_iiap	Peer-Individual: Interaction with Antisocial Peers (Higher = More Risk)	Mean(r029e, r029f, r029g, r029h, r029i, r029j)
s_ifud	Peer-Individual: Friends' Use of Drugs (Higher = More Risk)	Mean(r029a, r029b, r029c, r029d)
s_isen	Peer-Individual: Sensation Seeking (Higher = More Risk)	Mean(r037a, r037b, r037c)
s_irai	Peer-Individual: Rewards for Antisocial Involvement (Higher = More Risk)	Mean(r041a, r041b, r041c, r041d)
s_irel	Peer-Individual: Religiosity (Higher = More Protective) (Higher = More Risk)	Mean(r053)
s_ibmo	Peer-Individual: Belief in the Moral Order (Higher = More Protective)	Mean(r036, r046, r033, r034)
s_idep	Peer-Individual: Depression (Higher = More Risk)	Mean(r054, r055, r056, r057)
s_igan	Peer-Individual: Gang Involvement (Higher = More Risk)	Mean(r029k, r038, r039, r030i)

Table J-3. Description of Variables: Risk and Protective Factor Domain Scores

Variable Name	Variable Label	Formula
s_p_com	Domain score, community protective factors	Compute s_p_com = mean.2 (s_copi, s_crpi).
s_p_fam	Domain score, family protective factors	Compute s_p_fam = mean.3 (s_fatt, s_fopi, s_frpi).
s_p_sch	Domain score, school protective factors	compute s_p_sch = mean.2 (s_sopi, s_srpi).
s_p_pin	Domain score, individual/peer protective factors	compute s_p_pin = mean.3 (s_iprd, s_irel, s_ibmo).
s_r_com	Domain score, community risk factors	compute s_r_com = mean.5 (s_clna, s_ccd, s_ctm, s_clfd, s_cpad).
s_r_fam	Domain score, family risk factors	compute s_r_fam = mean.6 (s_fpfm, s_fpd, s_ffc, s_fhab, s_ffdu, s_ffab).
s_r_sch	Domain score, school risk factors	compute s_r_sch = mean.2 (s_saf, s_slcs).
s_r_pin	Domain score, individual/peer risk factors	compute s_r_pin = mean.12 (s_ireb, s_iepb, s_iimp, s_iasb, s_ifab, s_ifdu, s_iiap, s_ifud, s_isen, s_irai, s_idep, s_igan).

Table J-4. Description of Variables: Presence of Risk or Protection

Variable Name	Variable Label	Value Labels
ccd_alc	At risk on s_ccd for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ccd_any	At risk on s_ccd for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ccd_inh	At risk on s_ccd for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ccd_mj	At risk on s_ccd for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ccd_oth	At risk on s_ccd for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ccd_tob	At risk on s_ccd for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_alc	At risk on s_clfd for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_any	At risk on s_clfd for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_inh	At risk on s_clfd for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_mj	At risk on s_clfd for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_oth	At risk on s_clfd for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clfd_tob	At risk on s_clfd for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_alc	At risk on s_clna for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_any	At risk on s_clna for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_inh	At risk on s_clna for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_mj	At risk on s_clna for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_oth	At risk on s_clna for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
clna_tob	At risk on s_clna for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
copi_alc	Protected by s_copi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
copi_any	Protected by s_copi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
copi_inh	Protected by s_copi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
copi_mj	Protected by s_copi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
copi_oth	Protected by s_copi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
copi_tob	Protected by s_copi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_alc	At risk on s_cpad for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_any	At risk on s_cpad for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_inh	At risk on s_cpad for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_mj	At risk on s_cpad for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_oth	At risk on s_cpad for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
cpad_tob	At risk on s_cpad for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_alc	Protected by s_crpi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_any	Protected by s_crpi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_inh	Protected by s_crpi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_mj	Protected by s_crpi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_oth	Protected by s_crpi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
crpi_tob	Protected by s_crpi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ctm_alc	At risk on s_ctm for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
ctm_any	At risk on s_ctm for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ctm_inh	At risk on s_ctm for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ctm_mj	At risk on s_ctm for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ctm_oth	At risk on s_ctm for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ctm_tob	At risk on s_ctm for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_alc	At risk on s_epbc for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_any	At risk on s_epbc for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_inh	At risk on s_epbc for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_mj	At risk on s_epbc for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_oth	At risk on s_epbc for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
epbc_tob	At risk on s_epbc for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_alc	Protected by s_fatt from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_any	Protected by s_fatt from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_inh	Protected by s_fatt from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_mj	Protected by s_fatt from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_oth	Protected by s_fatt from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fatt_tob	Protected by s_fatt from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffab_alc	At risk on s_ffab for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffab_any	At risk on s_ffab for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
ffab_inh	At risk on s_ffab for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffab_mj	At risk on s_ffab for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffab_oth	At risk on s_ffab for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffab_tob	At risk on s_ffab for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_alc	At risk on s_ffc for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_any	At risk on s_ffc for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_inh	At risk on s_ffc for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_mj	At risk on s_ffc for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_oth	At risk on s_ffc for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffc_tob	At risk on s_ffc for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_alc	At risk on s_ffdu for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_any	At risk on s_ffdu for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_inh	At risk on s_ffdu for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_mj	At risk on s_ffdu for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_oth	At risk on s_ffdu for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ffdu_tob	At risk on s_ffdu for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fhab_alc	At risk on s_fhab for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fhab_any	At risk on s_fhab for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fhab_inh	At risk on s_fhab for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
fhab_mj	At risk on s_fhab for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fhab_oth	At risk on s_fhab for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fhab_tob	At risk on s_fhab for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_alc	Protected by s_fopi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_any	Protected by s_fopi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_inh	Protected by s_fopi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_mj	Protected by s_fopi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_oth	Protected by s_fopi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fopi_tob	Protected by s_fopi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_alc	At risk on s_fpd for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_any	At risk on s_fpd for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_inh	At risk on s_fpd for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_mj	At risk on s_fpd for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_oth	At risk on s_fpd for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpd_tob	At risk on s_fpd for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpfm_alc	At risk on s_fpfm for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpfm_any	At risk on s_fpfm for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpfm_inh	At risk on s_fpfm for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpfm_mj	At risk on s_fpfm for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
fpfm_oth	At risk on s_fpfm for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
fpfm_tob	At risk on s_fpfm for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_alc	Protected by s_frpi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_any	Protected by s_frpi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_inh	Protected by s_frpi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_mj	Protected by s_frpi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_oth	Protected by s_frpi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
frpi_tob	Protected by s_frpi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_alc	At risk on s_iasb for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_any	At risk on s_iasb for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_inh	At risk on s_iasb for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_mj	At risk on s_iasb for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_oth	At risk on s_iasb for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iasb_tob	At risk on s_iasb for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ibmo_alc	Protected by s_ibmo from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ibmo_any	Protected by s_ibmo from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ibmo_inh	Protected by s_ibmo from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ibmo_mj	Protected by s_ibmo from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ibmo_oth	Protected by s_ibmo from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
ibmo_tob	Protected by s_ibmo from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_alc	At risk on s_idep for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_any	At risk on s_idep for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_inh	At risk on s_idep for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_mj	At risk on s_idep for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_oth	At risk on s_idep for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
idep_tob	At risk on s_idep for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_alc	At risk on s_iepb for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_any	At risk on s_iepb for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_inh	At risk on s_iepb for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_mj	At risk on s_iepb for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_oth	At risk on s_iepb for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iepb_tob	At risk on s_iepb for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_alc	At risk on s_ifab for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_any	At risk on s_ifab for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_inh	At risk on s_ifab for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_mj	At risk on s_ifab for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_oth	At risk on s_ifab for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifab_tob	At risk on s_ifab for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
ifdu_alc	At risk on s_ifdu for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifdu_any	At risk on s_ifdu for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifdu_inh	At risk on s_ifdu for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifdu_mj	At risk on s_ifdu for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifdu_oth	At risk on s_ifdu for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifdu_tob	At risk on s_ifdu for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_alc	At risk on s_ifud for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_any	At risk on s_ifud for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_inh	At risk on s_ifud for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_mj	At risk on s_ifud for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_oth	At risk on s_ifud for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ifud_tob	At risk on s_ifud for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_alc	At risk on s_igan for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_any	At risk on s_igan for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_inh	At risk on s_igan for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_mj	At risk on s_igan for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_oth	At risk on s_igan for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
igan_tob	At risk on s_igan for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iiap_alc	At risk on s_iiap for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
iiap_any	At risk on s_iiap for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iiap_inh	At risk on s_iiap for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iiap_mj	At risk on s_iiap for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iiap_oth	At risk on s_iiap for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iiap_tob	At risk on s_iiap for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_alc	At risk on s_iimp for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_any	At risk on s_iimp for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_inh	At risk on s_iimp for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_mj	At risk on s_iimp for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_oth	At risk on s_iimp for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iimp_tob	At risk on s_iimp for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_alc	Protected by s_iprd from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_any	Protected by s_iprd from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_inh	Protected by s_iprd from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_mj	Protected by s_iprd from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_oth	Protected by s_iprd from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
iprd_tob	Protected by s_iprd from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irai_alc	At risk on s_irai for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irai_any	At risk on s_irai for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
irai_inh	At risk on s_irai for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irai_mj	At risk on s_irai for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irai_oth	At risk on s_irai for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irai_tob	At risk on s_irai for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_alc	At risk on s_ireb for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_any	At risk on s_ireb for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_inh	At risk on s_ireb for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_mj	At risk on s_ireb for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_oth	At risk on s_ireb for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
ireb_tob	At risk on s_ireb for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_alc	Protected by s_irel from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_any	Protected by s_irel from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_inh	Protected by s_irel from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_mj	Protected by s_irel from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_oth	Protected by s_irel from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
irel_tob	Protected by s_irel from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
Isen_alc	At risk on s_isen for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
isen_any	At risk on s_isen for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
isen_inh	At risk on s_isen for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
isen_mj	At risk on s_isen for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
isen_oth	At risk on s_isen for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
isen_tob	At risk on s_isen for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_alc	At risk on s_saf for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_any	At risk on s_saf for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_inh	At risk on s_saf for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_mj	At risk on s_saf for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_oth	At risk on s_saf for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
saf_tob	At risk on s_saf for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_alc	At risk on s_slcs for lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_any	At risk on s_slcs for lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_inh	At risk on s_slcs for lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_mj	At risk on s_slcs for lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_oth	At risk on s_slcs for lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
slcs_tob	At risk on s_slcs for lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
sopi_alc	Protected by s_sopi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
sopi_any	Protected by s_sopi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
sopi_inh	Protected by s_sopi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
sopi_mj	Protected by s_sopi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Variable Name	Variable Label	Value Labels
sopi_oth	Protected by s_sopi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
sopi_tob	Protected by s_sopi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_alc	Protected by s_srpi from lifetime alcohol use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_any	Protected by s_srpi from lifetime any substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_inh	Protected by s_srpi from lifetime inhalant use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_mj	Protected by s_srpi from lifetime marijuana use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_oth	Protected by s_srpi from lifetime other substance use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70
srpi_tob	Protected by s_srpi from lifetime tobacco use	0, Not at Risk; 1, At Risk; -1.00 Missing Because Area Under ROC Curve <=.70

Table J-5. Description of Variables: Flags for Self-Report Issues

Variable Name	Variable Labels	Value Labels	Formula
f_hon	Flag for dishonesty	0, no flag; 1 flag	compute f_hon=0. do if q130 eq 5. compute f_hon = 2. else if q130 eq 4. compute f_hon = 1. end if.
f_derb	Flag for derbisol (fake drug) use	0, no flag; 1 flag	compute f_derb=0. do if q073 > 1. compute f_derb = f_derb + 1. end if. do if q074 > 1. compute f_derb = f_derb + 1. end if.
f_40drg	Flag for heavy 30-day drug use	0, no flag; 1 flag	compute f_40drg = 0. do if (q068 eq 7) & (q070 eq 7) & (q072 eq 7). compute f_40drg = 0. end if. do if (q068 eq 7) & (q070 eq 7) & (q072 eq 7) & (q076 eq 7). compute f_40drg = 1. end if.
f_al_1b	Flag for alcohol inconsistency	0, no flag; 1 flag	compute f_al_1b = 0. do if (q030c eq 1) & (q062 > 1.5). compute f_al_1b = 1. end if.
f_al_2	Flag for alcohol inconsistency	0, no flag; 1 flag	compute f_al_2 = 0. do if (q030c > 1.5) & (q062 eq 1). compute f_al_2 = 1. end if.
f_cg_3	Flag for cigarette inconsistency	0, no flag; 1 flag	compute f_cg_3 = 0.

Variable Name	Variable Labels	Value Labels	Formula
			do if (q060 eq 1) & (q061 > 2.5). compute f_cg_3 = 1. end if.
f_tb_1	Flag for smokeless tobacco inconsistency	0, no flag; 1 flag	compute f_tb_1 = 0. do if (q058 eq 1) & (q059 > 1.5). compute f_tb_1 = 1. end if.
f_mj_2	Flag for marijuana inconsistency	0, no flag; 1 flag	compute f_mj_2 = 0. do if (q030a > 1.5) & (q065 eq 1). compute f_mj_2 = 1. end if.
f_mj_3	Flag for marijuana inconsistency	0, no flag; 1 flag	compute f_mj_3 = 0. do if (q066 > q065) & (q065 > 0). compute f_mj_3 = 1. end if.
f_ps_1	Flag for LSD/psychedelics inconsistency	0, no flag; 1 flag	compute f_ps_1 = 0. do if (q068 > q067) & (q067 > 0). compute f_ps_1 = 1. end if.
f_co_1	Flag for cocaine/crack inconsistency	0, no flag; 1 flag	compute f_co_1 = 0. do if (q070 > q069) & (q069 > 0). compute f_co_1 = 1. end if.
f_in_1	Flag for inhalants inconsistency	0, no flag; 1 flag	compute f_in_1 = 0. do if (q072 > q071) & (q071 > 0). compute f_in_1 = 1. end if.
f_db_1	Flag for derbisol (fake drug) inconsistency	0, no flag; 1 flag	compute f_db_1 = 0. do if (q074 > q073) & (q073 > 0). compute f_db_1 = 1. end if.

Variable Name	Variable Labels	Value Labels	Formula
f_od_1	Flag for other drug inconsistency	0, no flag; 1 flag	compute f_od_1 = 0. do if (q076 > q075) & (q075 > 0). compute f_od_1 = 1. end if.
f_exclu1	Exclude case from analyses because of flags or because reported belonging to a grade not sampled in the county	0, no, keep case in; 1, yes, exclude case	compute f_exclu1=0. if f_hon=2 or f_derb=2 or f_40drg=1 or f_drug1>1 or f_drug2=5 f_exclu1=1.

Table J-6. Description of Variables: Weighting Variables

Variable Name	Variable Labels	Formula
z_reswat	Non-response weight	1/response rate for county and grade
z_popwat	Population weight--inverse of probability of selection	1/probablity of class selection
z_pstwat	Post stratification weight	Total number in county and grade according to enrollment statistics/total number in county and grade according to survey data.
z_weight	Final weight for analysis	z_reswat*z_popwat*z_pstwat

Table J-7. Description of Variables: Lifetime Substance Use

Variable Name	Variable Labels	Value Labels	Formula
life_alc	Lifetime alcohol use	0, no, never used alcohol; 1, yes, has used alcohol in lifetime	If (q062 = 1 and q030c = 1) life_alc = 0. If (q062 > 1 or q030c > 1) life_alc = 1.
life_mj	Lifetime marijuana use	0, no, never used marijuana; 1, yes, has used marijuana in lifetime	If (q065 = 1 and q030a = 1) life_mj = 0. If (q065 > 1 or q030a > 1) life_mj = 1.

life_tob	Lifetime any tobacco use	0, no, never used inhalants;
		1, yes, has used inhalants in lifetime
			If (q058 = 1 and q060 = 1 and q030b = 1) life_tob = 0.
			If (q058 > 1 or q060 > 1 or q030b > 1) life_tob = 1.
			0, no, never used marijuana;
			1, yes, has used marijuana in lifetime

life_inh	Lifetime inhalant use	0, no, never used inhalants; 1, yes, has used inhalants in lifetime	If q071 = 1 life_inh = 0. If q071 > 1 life_inh = 1.
life_oth	Lifetime other drug use	0, no, never used other drugs; 1, yes, has used other drugs in lifetime	If (q067 = 1 and q069 = 1 and q075 = 1) life_oth = 0. If (q067 > 1 or q069 > 1 or q075 > 1) life_oth = 1.

Table J-8. Description of Variables: Filter Variables

Variable Name	Variable Labels	Value labels	Formula
f_exclu1	Exclude case from analyses because of flags or because reported belonging to a grade not sampled in the county	0, no, keep case in; 1, yes, exclude case	compute f_exclu1=0. if f_hon=2 or f_derb=2 or f_40drg=1 or f_drug1>1 or f_drug2=5 f_exclu1=1. if z_county = 'Bullock' and GRADE > 6 f_exclu1 = 1. if z_county = 'Macon' and GRADE > 8 f_exclu1 = 1. if z_county = 'Russell' and GRADE > 8 f_exclu1 = 1. if (z_county = 'Wilcox' and (GRADE = 7 OR GRADE = 8)) f_exclu1 = 1.
keep	Include case in analyses	1, yes, keep case in; 0, no, exclude case	Compute keep = 0. If f_exclu1 = 0 keep = 1.

Table J-9. Description of Variables: Demographics

Variable Name	Variable Labels	Value Labels	Formula

grade	Grade of respondent, recode	6, grade 6;
		7, grade 7;
		8, grade 8;
		9, grade 9;
		10, grade 10;
		11, grade 11;
		12, grade 12
			If (q002 = 1) grade = 6.
			If (q002 = 2) grade = 7.
			If (q002 = 3) grade = 8.
			If (q002 = 4) grade = 9.
			If (q002 = 5) grade = 10.
			If (q002 = 6) grade = 11.
			If (q002 = 7) grade = 12.

af_amer	African American/Black, recode	0, not African American/Black; 1, African American/Black	do if (q004b_1 = 1 or q004b_2 = 1 or q004b_3 = 1 or q004b_4 = 1 or q004b_5 = 1). compute af_amer = 0. End if. if (q004b_2 = 1) af_amer = 1.
asian	Asian, recode	0, not Asian; 1, Asian	do if (q004b_1 = 1 or q004b_2 = 1 or q004b_3 = 1 or q004b_4 = 1 or q004b_5 = 1). compute asian = 0. End if. If (q004b_4 = 1) asian = 1.
cauc	Caucasian, recode	0, not Caucasian 1, Caucasian	do if (q004b_1 = 1 or q004b_2 = 1 or q004b_3 = 1 or q004b_4 = 1 or q004b_5 = 1). compute cauc = 0. end if. if (q004b_1 = 1) cauc = 1.
ntv_amer	Native American/Alaskan, recode	0, not Native American/Alaskan; 1, Native American/Alaskan	do if (q004b_1 = 1 or q004b_2 = 1 or q004b_3 = 1 or q004b_4 = 1 or q004b_5 = 1). compute ntv_amer = 0. End if. if (q004b_3 = 1) ntv_amer = 1.
pacific	Pacific Island/Hawaiian recode	0, not Pacific Islander/Hawaiian; 1, Pacific Islander/Hawaiian	do if (q004b_1 = 1 or q004b_2 = 1 or q004b_3 = 1 or q004b_4 = 1 or q004b_5 = 1). compute pacific = 0. End if. if (q004b_5 = 1) pacific = 1.

Table J-10. Description of Variables: Scanning Information

Variable Name	Variable Labels	Formula
z_date	Scan date	String
z_time	Scan time	String
z_session	Scan session	String
z_number	Scan number	String
z_numbrc	Scan number converted to numeric	Numeric

Table J-11. Description of Variables: Geographic Area

Variable Name	Variable Labels	Value Label
z_school	Name of school	None, string variable
z_class	Class number	None, continuous numeric variable
z_county	County name	None, string variable
z_region	Health region	1, Region 1; 2, Region 2; 3, Region 3; 4, region 4

Table J-12. Description of Variables: Flag for Classes in OMB subsample

Variable Name	Variable Label	Value Label*
z_omb	Was participant in a class selected for OMB subsample	0, no, not part of OMB sample; 1, yes, part of OMB sample

*Classes that were part of the OMB subsample received questionnaires and other materials with the OMB control number printed on them. In addition, the OMB questionnaires in the subsample were purple rather than blue. Some respondents in the OMB classes may have received regular materials rather than OMB materials because some teachers borrowed materials from other classes.